

FILE 'REGISTRY' ENTERED AT 13:41:31 ON 21 DEC 2010

L1           1 S E3  
            EXP GALACTOMANNAN/CN  
L2           1 S E7  
            EXP TARA/CN  
L3           1 S E3  
            EXP GUAR GUM/CN  
L4           1 S E3  
            EXP LOCUST BEAN GUM/CN

FILE 'HCAPLUS' ENTERED AT 13:42:40 ON 21 DEC 2010

L5           15760 S L1-L4  
L6           231476 S ((QUATERNARY AMMONIUM) OR CATIONIC  
L7           1674 S L5 AND L6  
L8           3718 S GALACTOMANNAN  
L9           162 S L7 AND L8  
L10          110 S L9 AND (PY<2005 OR AY<2005 OR PRY<2005)

FILE 'STNGUIDE' ENTERED AT 13:43:57 ON 21 DEC 2010

FILE 'HCAPLUS' ENTERED AT 13:44:22 ON 21 DEC 2010

L11          15 S ((QUATERNARY AMMONIUM) OR (TRIMETHYLAMMONIUM) OR TRIALKYLAMMO  
L12          105 S ((QUATERNARY AMMONIUM) OR (TRIMETHYLAMMONIUM) OR TRIALKYLAMMO  
L13          74 S L12 AND (PY<2005 OR AY<2005 OR PRY<2005)  
L14          12 S L8 AND L13  
L15          1302860 S PURIFIED OR PURIFICATION OR REFINED OR REFINING OR SEPARATION  
L16          716 S L5 AND L15  
L17          385 S L8 AND L15  
L18          242968 S (QUATERNARY AMMONIUM) OR TRIMETHYLAMMONIUM OR TRIETHYLAMMONIU  
L19          385 S L17 AND L17  
L20          17 S L17 AND L18  
L21          9 S L20 AND (PY<2005 OR AY<2005 OR PRY<2005)

FILE 'REGISTRY' ENTERED AT 14:36:39 ON 21 DEC 2010

            EXP GLYCIDYLTRIMETHYLAMMONIUM/CN  
            EXP GLYCIDYLTRIMETHYLAMMONIUM GUAR/CN  
            EXP GLYCIDYLTRIMETHYLAMMONIUM/CN  
L22          2 S E10-E11

FILE 'HCAPLUS' ENTERED AT 14:37:45 ON 21 DEC 2010

L23          1227 S L22  
L24          6 S L17 AND L22  
L25          99 S L1/PUR  
L26          1 S L18 AND L25  
L27          69 S L25 AND (PY<2005 OR AY<2005 OR PRY<2005)  
L28          89686 S COSMETIC OR SHAMPOO

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=> file reg
COST IN U.S. DOLLARS          SINCE FILE          TOTAL
                                ENTRY          SESSION
FULL ESTIMATED COST          0.22          0.22
```

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Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

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STRUCTURE FILE UPDATES:  20 DEC 2010  HIGHEST RN 1257203-13-6
DICTIONARY FILE UPDATES: 20 DEC 2010  HIGHEST RN 1257203-13-6
```

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2010.

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
 predicted properties as well as tags indicating availability of  
 experimental property data in the original document. For information  
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdnc/properties.html>

```
=> exp galactomannan/cn
E1      1      GALACTOLIPID-GALACTOLIPID ACYLTRANSFERASE/CN
E2      1      GALACTOLIPID:GALACTOLIPID GALACTOSYLTRANSFERASE/CN
E3      1 --> GALACTOMANNAN/CN
E4      1      GALACTOMANNAN CARBOXYMETHYL ETHER/CN
E5      1      GALACTOMANNAN CARBOXYMETHYL ETHER CALCIUM SALT/CN
E6      1      GALACTOMANNAN CYANOETHYL ETHER/CN
E7      1      GALACTOMANNAN GALACTOSYL TRANSFERASE (COFFEA ARABICA CLONE P
VC11 GENE GMGT1)/CN
E8      1      GALACTOMANNAN GALACTOSYL TRANSFERASE (COFFEA CANEPHORA CLONE
PCCCL26F9 GENE GMGT2)/CN
E9      1      GALACTOMANNAN GALACTOSYLTRANSFERASE/CN
E10     1      GALACTOMANNAN GALACTOSYLTRANSFERASE (FENUGREEK GENE GALTRAN
C-TERMINAL FRAGMENT)/CN
E11     1      GALACTOMANNAN GALACTOSYLTRANSFERASE (LOTUS CORNICULATUS JAPO
NICUS GENE GMGT1)/CN
E12     1      GALACTOMANNAN GALACTOSYLTRANSFERASE 1 (COFFEA ARABICA CLONE
PVC11)/CN
```

```
=> s e3
L1      1      GALACTOMANNAN/CN
```

```
=> exp tara/cn
E1      1      TAR1 RECEPTOR (MACACA MULATTA GENE TAR1)/CN
E2      1      TAR3 SENSOR KINASE/CN
E3      2 --> TARA/CN
E4      2      TARA 1A ISOFORM (DROSOPHILA MELANOGASTER GENE TARA)/CN
E5      2      TARA 1B ISOFORM (DROSOPHILA MELANOGASTER GENE TARA)/CN
E6      1      TARA 909/CN
E7      1      TARA GUM/CN
E8      1      TARA GUM HYDROXYPROPYLTRIMONIUM CHLORIDE/CN
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E9      1      TARA GUM, 2-HYDROXY-3-(TRIMETHYLAMMONIO)PROPYL ETHER/CN
E10     1      TARA GUM, 2-HYDROXY-3-(TRIMETHYLAMMONIO)PROPYL ETHER, CHLORI
          DE/CN
E11     1      TARA GUM, CARBOXYMETHYL ETHER/CN
E12     1      TARA GUM, HYDROGEN SULFATE/CN

```

=> s e7

```
L2      1 "TARA GUM"/CN
```

=> exp guar gum/cn

```

E1      1      GUAR CARBOXYMETHYL 3-TRIMETHYLSILYLPROPYL ETHER/CN
E2      1      GUAR FLOUR/CN
E3      1 -->   GUAR GUM/CN
E4      1      GUAR GUM 2-HYDROXY-3-(TRIMETHYLAMMONIO)PROPYL ETHER CHLORIDE
          -TRISODIUM METAPHOSPHATE COPOLYMER/CN
E5      1      GUAR GUM ACRYLATE/CN
E6      1      GUAR GUM ALLYL ETHER/CN
E7      1      GUAR GUM CARBAMOYLETHYL CARBOXYMETHYL ETHER/CN
E8      1      GUAR GUM CARBOXY ETHYL ETHER/CN
E9      1      GUAR GUM CARBOXYMETHYL 2-HYDROXYPROPYL ETHER-N-ISOPROPYLACRY
          LAMIDE GRAFT COPOLYMER/CN
E10     1      GUAR GUM CARBOXYMETHYL ETHER SODIUM SALT-METHYL ACRYLATE GRA
          FT COPOLYMER/CN
E11     1      GUAR GUM CHLOROFORMATE/CN
E12     1      GUAR GUM DIALDEHYDE/CN

```

=> s e3

```
L3      1 "GUAR GUM"/CN
```

=> exp locust bean gum/cn

```

E1      1      LOCUST ADIPOKINETIC HORMONE II/CN
E2      1      LOCUST ADIPOKINETIC HORMONE III/CN
E3      1 -->   LOCUST BEAN GUM/CN
E4      1      LOCUST BEAN GUM DIALDEHYDE/CN
E5      1      LOCUST BEAN GUM HYDROXYPROPYL ETHER/CN
E6      1      LOCUST BEAN GUM POLYALDEHYDE/CN
E7      1      LOCUST BEAN GUM TRIACETATE/CN
E8      1      LOCUST BEAN GUM-DIMETHYLSILANEDIOL GRAFT COPOLYMER/CN
E9      1      LOCUST BEAN GUM-SODIUM BORATE COPOLYMER/CN
E10     1      LOCUST BEAN GUM-TETRAKIS(2-HYDROXYETHYL) ORTHOSILICATE COPOL
          YMER/CN
E11     1      LOCUST BEAN, FLOUR/CN
E12     1      LOCUST BEAN, MEAL/CN

```

=> s e3

```
L4      1 "LOCUST BEAN GUM"/CN
```

=> fiel hcaplus

FIEL IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
 For a list of commands available to you in the current file, enter  
 "HELP COMMANDS" at an arrow prompt (=>).

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
22.98	23.20

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 13:42:40 ON 21 DEC 2010

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FILE COVERS 1907 - 21 Dec 2010 VOL 153 ISS 26  
FILE LAST UPDATED: 20 Dec 2010 (20101220/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

HCAPlus now includes complete International Patent Classification (IPC) reclassification data for the fourth quarter of 2010.

CAS Information Use Policies apply and are available at:

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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s 11-14
      3092 L1
      737 L2
      11743 L3
      4957 L4
L5      15760 (L1 OR L2 OR L3 OR L4)

=> s (quaternary ammonium) or cationic
      159427 QUATERNARY
      495696 AMMONIUM
      79594 QUATERNARY AMMONIUM
          (QUATERNARY (W) AMMONIUM)
      164926 CATIONIC
L6      231476 (QUATERNARY AMMONIUM) OR CATIONIC

=> s 15 and 16
L7      1674 L5 AND L6

=> s galactomannan
L8      3718 GALACTOMANNAN

=> s 17 and 18
L9      162 L7 AND L8

=> s 19 and (PY<2005 or AY<2005 or PRY<2005)
      25159898 PY<2005
      5176428 AY<2005
      4657096 PRY<2005
L10     110 L9 AND (PY<2005 OR AY<2005 OR PRY<2005)
```

=> file stnguide  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION

FULL ESTIMATED COST 5.82 29.02

FILE 'STNGUIDE' ENTERED AT 13:43:57 ON 21 DEC 2010  
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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Dec 17, 2010 (20101217/UP).

=> file hcaplus	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	0.07	29.09

FILE 'HCAPLUS' ENTERED AT 13:44:22 ON 21 DEC 2010  
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FILE COVERS 1907 - 21 Dec 2010 VOL 153 ISS 26  
FILE LAST UPDATED: 20 Dec 2010 (20101220/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010  
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CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s ((quaternary ammonium) or (trimethylammonium) or trialkylammonium) (4a)galactomannan)  
UNMATCHED RIGHT PARENTHESIS 'ACTOMANNAN')  
The number of right parentheses in a query must be equal to the number of left parentheses.

=> s ((quaternary ammonium) or (trimethylammonium) or trialkylammonium) (4a)galactomannan  
159427 QUATERNARY  
495696 AMMONIUM  
79594 QUATERNARY AMMONIUM  
(QUATERNARY (W) AMMONIUM)  
12597 TRIMETHYLAMMONIUM  
832 TRIALKYLAMMONIUM  
3718 GALACTOMANNAN

L11 15 ((QUATERNARY AMMONIUM) OR (TRIMETHYLAMMONIUM) OR TRIALKYLAMMONIUM)

M) (4A) GALACTOMANNAN

=> s ((quaternary ammonium) or (trimethylammonium) or trialkylammonium) (4a) (galactomannan or guar or tara or (locust bean))

159427 QUATERNARY

495696 AMMONIUM

79594 QUATERNARY AMMONIUM

(QUATERNARY(W)AMMONIUM)

12597 TRIMETHYLAMMONIUM

832 TRIALKYLAMMONIUM

3718 GALACTOMANNAN

14843 GUAR

1152 TARA

9852 LOCUST

72012 BEAN

4781 LOCUST BEAN

(LOCUST(W)BEAN)

L12 105 ((QUATERNARY AMMONIUM) OR (TRIMETHYLAMMONIUM) OR TRIALKYLAMMONIUM) (4A) (GALACTOMANNAN OR GUAR OR TARA OR (LOCUST BEAN))

=> s l12 and (PY<2005 or AY<2005 or PRY<2005)

25159898 PY<2005

5176428 AY<2005

4657096 PRY<2005

L13 74 L12 AND (PY<2005 OR AY<2005 OR PRY<2005)

=> s l8 and l13

L14 12 L8 AND L13

=> d l14 1-12 ti abs bib

L14 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Cation-modified purified guar gum, and cosmetics containing it

AB The cation-modified purified guar gum, useful for cosmetics (including hair preps.), is obtained by substitution of part of OH groups of purified guar gum (galactomannan content  $\geq 90$  weight%, turbidity of 1 weight% aqueous solution  $\leq 15\%$ ) composed of backbones comprising mannose units and side chains comprising galactose units (mannose:galactose composition ratio 2:1) with quaternary ammonium-containing groups  $O(R_4O)nCH_2CH(OH)CH_2N^+R_1R_2R_3$  X- [R1, R2 = C1-3 alkyl; R3 = C1-24 alkyl; X- = anion; n = 0, 1-30; when n = 1-30, then (R4O)n = polyalkylene glycol chain comprising  $\geq 1$  kind of C2-4 alkylene oxide units], has cation-exchange capacity (CEC; derived from the quaternary ammonium groups) 0.1-3 mequiv/g, and shows turbidity of 1% aqueous solution  $\leq 15\%$ . Purified guar gum (galactomannan content 97 weight%, turbidity of 1 weight% aqueous solution 5.0%) was treated with glycidyltrimethylammonium chloride

to give cation-modified purified guar gum (CEC 0.91 mequiv/g, turbidity of 1 weight% aqueous solution 4.8%). A shampoo containing 0.3 weight% of the cation-modified

purified guar gum showed good hair-smoothing effect.

AN 2006:627633 HCAPLUS <<LOGINID:20101221>>

DN 145:89412

TI Cation-modified purified guar gum, and cosmetics containing it

IN Mori, Yoshihiko; Takeda, Hiromitsu; Suzuki, Akio

PA Toho Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006169410	A	20060629	JP 2004-365130	20041216 <--
PRAI	JP 2004-365130		20041216	<--	

L14 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Cationically modified galactomannan-containing polysaccharides and cosmetic compositions containing them  
 AB The polysaccharides are manufactured by purifying the crude polysaccharides derived from fenugreek seed endosperm of legume family and having galactomannan content  $\geq 85\%$ , with mannose units (M) on main chain and galactose units (G) side chain at a M/G ratio of 1:1, then cationizing the polysaccharides using specific quaternary ammonium group-introducing compds. The cationic derivs. are useful for hair and body care products such as shampoos and rinse compns. with good conditioning property, feel and softness. Thus, cationizing a fenugreek gum (88% galactomannan content) with glycidyltrimethylammonium chloride gave a cationic product.

AN 2006:485572 HCAPLUS <<LOGINID:20101221>>  
 DN 144:490667  
 TI Cationically modified galactomannan-containing polysaccharides and cosmetic compositions containing them  
 IN Takeda, Hiromitsu; Mori, Yoshihiko  
 PA Toho Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 35 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006131862	A	20060525	JP 2004-368566	20041220 <--
PRAI	JP 2004-293088	A	20041005	<--	

L14 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Cation-modified galactomannan polysaccharide and cosmetic composition containing the same  
 AB Disclosed a cation-modified galactomannan polysaccharide that when mixed in a hair treatment composition, realizes excellent conditioning effect and, after drying, moist nice feel and flexibility, and that when mixed in a skin cosmetic composition such as body soap, realizes conditioning effect and, due to emulsification performance, enhanced feeling after use. In particular, a cation-modified galactomannan polysaccharide obtained by providing a galactomannan polysaccharide being a nonionic polysaccharide comprising a main chain of mannose constituent units having side chains of galactose units wherein the ratio of mannose and galactose contained is 1:1, the polysaccharide produced from the albumen portion of seeds of leguminous plant fenugreek (*Trigonella foenum-graecum*); and introducing a specified quaternary nitrogenous group at some of the hydroxyls contained in the galactomannan polysaccharide. There is further provided a cosmetic composition containing

the cation-modified galactomannan polysaccharide. Thus, fenugreek germ powder solution was reacted with glycidyltrimethylammonium chloride to obtain a cationic galactomannan polysaccharide. The obtained cationic galactomannan polysaccharide was combined at 0.7 % with cationic water-soluble polymer (Catinal HC-100) 0.4, sodium polyoxyethylenelaurylsulfate 9, coco fatty acid amidopropylbetaine 4.5, coco fatty acid monoethanolamide 2.5, sodium edetate 0.1, sodium benzoate 0.1, citric acid q.s., to pH 5.5-6, and water balance to 100 % to make a shampoo composition

AN 2004:996224 HCAPLUS <<LOGINID:20101221>>  
 DN 141:415606  
 TI Cation-modified galactomannan polysaccharide and cosmetic  
 composition containing the same  
 IN Takeda, Hiromitsu; Mori, Yoshihiko  
 PA Toho Chemical Industry Co., Ltd., Japan  
 SO PCT Int. Appl., 65 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004099258	A1	20041118	WO 2004-JP6512	20040507 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1630176	A1	20060301	EP 2004-731763	20040507 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1777623	A	20060524	CN 2004-80010882	20040507 <--
CN 101129306	A	20080227	CN 2007-10141629	20040507 <--
US 20060275235	A1	20061207	US 2005-554874	20051031 <--
IN 2005DN05061	A	20071012	IN 2005-DN5061	20051107 <--
IN 239683	A1	20100409		
PRAI WO 2003-167131	A	20030509	<--	
CN 2004-80010882	A3	20040507	<--	
WO 2004-JP6512	W	20040507	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)  
 RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Sizing of paper in bulk and on the surface  
 AB In the title process, in which water retention by the sizing bath is decreased and dewatering of the paper is facilitated, biopolymers bearing -CH2CH(OH)CH2NR1R2R3+ groups (R1 = C8-22 hydrocarbyl group; R2, R3 = C1-4 alkyl group) are used as sizing agents. The reaction of starch with (3-chloro-2-hydroxypropyl)trimethylammonium chloride in the presence of NaOH gave a cationic starch with degree of substitution 0.024. Use of this product in sizing paper is exemplified.

AN 2001:559522 HCAPLUS <<LOGINID:20101221>>  
 DN 135:124041  
 TI Sizing of paper in bulk and on the surface  
 IN Brossmer, Christoph; Bischoff, Dietmar  
 PA Degussa-Huels A.-G., Germany  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI DE 19958182 A1 20010802 DE 1999-19958182 19991202 <--  
 PRAI DE 1999-19958182 19991202 <--  
 RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Hair-dyeing and -tinting composition containing galactomannan derivative  
 AB Addition of a galactomannan, especially a C2-4-alkyl guar gum, to a powdered direct hair dye prevents clumping of the dye on dispersion in water and thereby permits uniform dyeing of the hair and provides an improved color intensity. Thus, 5 g of a powdered dye composition containing hydroxypropyl guar gum  
 14.00, cyclodextrin 3.50, PEG-1500 20.00, fatty alc. polyglycol ether 13.00, wheat protein hydrolyzate 2.40, honey dry extract 3.00,, starch 38.00, K sorbate 3.30, C.I. 56059 0.65, C.I. 12250 2.00, and C.I. 12251 0.15 parts, when mixed with 80 g water and used to treat hair for 20 min, imparted a light blond color to the hair.  
 AN 1997:226782 HCAPLUS <<LOGINID::20101221>>  
 DN 126:216432  
 OREF 126:41771a, 41774a  
 TI Hair-dyeing and -tinting composition containing galactomannan derivative  
 IN Eberling, Walter; Klusch, Hans; Lorenz, Heribert; Petzke, Erika  
 PA Goldwell GmbH, Germany  
 SO Ger. Offen., 6 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19530998	A1	19970227	DE 1995-19530998	19950823 <--
DE 19530998	C2	19980319		
JP 09100224	A	19970415	JP 1996-200185	19960730 <--
EP 761200	A2	19970312	EP 1996-112868	19960809 <--
EP 761200	A3	19990331		
EP 761200	B1	20010418		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
AT 200614	T	20010515	AT 1996-112868	19960809 <--
PRAI DE 1995-19530998	A	19950823	<--	
OSC.G 6	THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)			
RE.CNT 1	THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD			
ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L14 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Preparation of low-viscosity cationized galactomannans as cosmetic bases  
 AB Low-viscosity cationized galactomannans with N content 0.2-3 weight% and viscosity of 30% aqueous solution (at 30°) 3-500 cPs, in which the OH groups are partially substituted with OCH<sub>2</sub>CH(OH)CH<sub>2</sub>N+R<sub>1</sub> R<sub>2</sub>R<sub>3</sub> X- (R<sub>1</sub>-3 = C1-3 alkyl; X- = anion), are claimed as cosmetic bases. The cosmetic bases show good compatibility with the hair and skin and show softening and smoothing effects. Guar gum was treated with glycidyltrimethylammonium chloride to give a low-viscosity cationized guar gum (I). A shampoo containing 2 weight% I was formulated.  
 AN 1995:795724 HCAPLUS <<LOGINID::20101221>>  
 DN 123:208493  
 OREF 123:36943a, 36946a  
 TI Preparation of low-viscosity cationized galactomannans as cosmetic bases  
 IN Nakajima, Tooru; Watanabe, Yoshihiro; Saka, Naoko

PA Nippon Starch Refining, Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07173029	A	19950711	JP 1993-355303	19931217 <--
PRAI	JP 1993-355303		19931217	<--	

L14 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Preparation of cationized hydroxyalkyl galactomannans as cosmetic bases  
 AB Galactomannan hydroxyalkyl ethers with MS value 0.1-1.8, in which the OH group is partially substituted with OCH<sub>2</sub>CH(OH)CH<sub>2</sub>N+R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>X- (R<sub>1</sub>-3 = C1-3 alkyl; X- = anion) and the N content is 0.2-3 weight%, are claimed as cosmetic bases. The bases show good compatibility with the hair and skin, and show softening and smoothing effects. Guar gum was successively treated with ethylene oxide and glycidyltrimethylammonium chloride to give a cationized guar gum (I) with MS value 1.2 and N content 2.4 weight%. A shampoo containing 2 weight% I was formulated.

AN 1995:795723 HCAPLUS <<LOGINID:20101221>>

DN 123:179134

OREF 123:31703a,31706a

TI Preparation of cationized hydroxyalkyl galactomannans as cosmetic bases

IN Nakajima, Toru; Watanabe, Yoshihiro; Saka, Naoko

PA Nippon Starch Refining, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07173028	A	19950711	JP 1993-355302	19931217 <--
PRAI	JP 1993-355302		19931217	<--	

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L14 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Process for the dry cationization of galactomannans

AB In the title process, which requires little mixing power and gives products which can be used without further processing, galactomannans are treated with epoxides in the presence of H<sub>2</sub>O, alkalies, fine, hydrophilic SiO<sub>2</sub>, and alkali metal silicates and/or aluminates. Mixing 1 kg powdered guar gum (10.0% H<sub>2</sub>O) with 46.89 g of a 69.45:30.55 mixture of Na metasilicate and spray-dried SiO<sub>2</sub> (sp. surface 190 m<sup>2</sup>/g), adding 472.66 g solution of 210.42 g glycidyltrimethylammonium chloride over 3 min, and mixing for 15 min gave a product which, after 4 days at 20°, had degree of substitution 0.1188 (47.5% yield).

AN 1989:425231 HCAPLUS <<LOGINID:20101221>>

DN 111:25231

OREF 111:4377a,4380a

TI Process for the dry cationization of galactomannans

IN Stoher, Reinhard; Fischer, Wolfgang; Huss, Michael; Pieter, Reimund

PA Degussa A.-G., Fed. Rep. Ger.

SO Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 303040	A2	19890215	EP 1988-110449	19880630 <--
	EP 303040	A3	19890906		
	EP 303040	B1	19931201		
	R: BE, DE, ES, FR, GB, IT, SE				
	DE 3726984	A1	19890223	DE 1987-3726984	19870813 <--
	ES 2060623	T3	19941201	ES 1988-110449	19880630 <--
	IN 169654	A1	19911130	IN 1988-CA570	19880707 <--
	ZA 8805105	A	19890329	ZA 1988-5105	19880714 <--
	FI 8803618	A	19890214	FI 1988-3618	19880802 <--
	FI 90984	B	19940114		
	FI 90984	C	19940425		
	US 4940784	A	19900710	US 1988-227298	19880802 <--
	JP 01066202	A	19890313	JP 1988-200312	19880812 <--
	JP 2577451	B2	19970129		
	CA 1309090	C	19921020	CA 1988-574689	19880812 <--
PRAI	DE 1987-3726984	A	19870813 <--		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
OS MARPAT 111:25231

L14 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Process for dry cationization of galactomannans  
GI



AB Galactomannans are dry cationized by reaction with I (R1 = Cl-4 alkyl, Bz; R2 = Cl-4 alkyl; n = 1-3) or II (R3 = Cl-4 alkyl; X = Cl, Br, AcO, sulfate) in alkaline medium in the presence H2O at 5-60° in the presence of finely divided silicic acid. These products are useful in paper manufacture, and have greater dispersibility than native guar gum, and do not suffer from dewatering problems in screening operations. Thus, 50 kg guar gum (H2O content 11.6%, insol. N content 0.693%) was thoroughly mixed with 1.768 kg Activator PC-2 [Ca(OH)2 75%, silicic acid 25%], mixed 5 min, over 5 min 21.290 kg of a reaction solution containing 8.264 kg II (R1-R3 =

Me, X = Cl, n = 1) was added, stirred for 10 min, and then stored for 5 days at 20°, producing a cationic guar gum which had N content 1.695%, corresponding to substitution degree 0.130 and a yield of 65.1%. The viscosity of a 1% guar paste was 880 mPa·s (Brookfield viscometer after 5 min at 25° and at 100 rpm).

AN 1988:23615 HCAPLUS <<LOGINID:20101221>>

DN 108:23615

OREF 108:3996h,3997a

TI Process for dry cationization of galactomannans  
IN Stober, Reinhard; Fischer, Wolfgang; Huss, Michael  
PA Degussa A.-G., Fed. Rep. Ger.  
SO Ger. Offen., 6 pp.  
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

PI	DE 3604795	A1	19870820	DE 1986-3604795	19860215 <--
	DE 3604795	C2	19880204		
	EP 234014	A2	19870902	EP 1986-116804	19861203 <--
	EP 234014	A3	19880504		
	EP 234014	B1	19930721		
	R: BE, DE, ES, FR, GB, IT, SE				
	ES 2058058	T3	19941101	ES 1986-116804	19861203 <--
	BR 8606472	A	19871020	BR 1986-6472	19861229 <--
	US 4758282	A	19880719	US 1986-947180	19861229 <--
	FI 8700249	A	19870816	FI 1987-249	19870121 <--
	FI 82840	B	19910115		
	FI 82840	C	19910425		
	ZA 8700717	A	19870930	ZA 1987-717	19870130 <--
	JP 62192402	A	19870824	JP 1987-20616	19870202 <--
	JP 07021001	B	19950308		
	AU 8768506	A	19870820	AU 1987-68506	19870204 <--
	AU 593322	B2	19900208		
	CA 1292980	C	19911210	CA 1987-529639	19870213 <--
	IN 168086	A1	19910202	IN 1987-CA213	19870313 <--
PRAI	DE 1986-3604795	A	19860215	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)  
 RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Development of a cationically adjusted coating - possibilities and limits to industrial applications  
 AB Treatment with quaternary NH<sub>4</sub> compound, cationic poly(amine-amide) or guar gum (I) [9000-30-0] as cationic dispersant adjusted the pos. charge of CaCO<sub>3</sub> and kaolin in slurry to 20-30 mV, and CaCO<sub>3</sub> and kaolin dispersions of 70% and 50% solids content (SC) were obtained with 2.0% and 3% poly(amine-amide), resp. Cationic dispersion of CaCO<sub>3</sub> yielded higher relative sedimentation volume than did anionic dispersion at comparable  $\zeta$ -potential, and in order to afford an optimal dispersion (up to 70% SC) 0.15-0.3% I was required. Cationic epichlorohydrin-resin produced higher cationic charge to CaCO<sub>3</sub>-based coating in comparison to melamine resin. In the coating of paper with CaCO<sub>3</sub> containing cationic I and binders, an increase in the content of binder by 2% improved the wet picking resistance; whiteness of coating was somewhat higher than standard, and opacity values were comparable to those of standard coating. Cationic dispersants showed less desorption on CaCO<sub>3</sub> and kaolin than anionic ones, so that cationic dispersants and binders can remove loading in H<sub>2</sub>O-closed systems by adsorption of anionic impurities and fines on cationic pigment reducing COD.

AN 1984:425232 HCAPLUS <<LOGINID:20101221>>  
 DN 101:25232  
 OREF 101:3995a,3998a  
 TI Development of a cationically adjusted coating - possibilities and limits to industrial applications  
 AU Gatterer, Hans Georg; Weigl, Josef  
 CS MD Papierfabr., Dachau, Fed. Rep. Ger.  
 SO Wochenblatt fuer Papierfabrikation (1984), 112(6), 176-8, 180-1, 183  
 CODEN: WBPFAZ; ISSN: 0043-7131  
 DT Journal  
 LA German  
 OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L14 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Anti-carries preparations

AB Cationic polysaccharides are used to inhibit dental caries. Thus, a dentifrice was prepared containing 2% Jaguar C-13, a quaternary ammonium derivative of guar gum.

AN 1980:64789 HCAPLUS <<LOGINID::20101221>>

DN 92:64789

OREF 92:10605a,10608a

TI Anti-carries preparations

IN Phillips, Glyn Owen; Hall, Alan Newman; Hogg, Stephen David

PA Nicholas Pty. Ltd., Australia

SO Belg., 36 pp.

CODEN: BEXXAL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 876639	A1	19790917	BE 1979-195463	19790530 <--
	DK 7902197	A	19791201	DK 1979-2197	19790528 <--
	DE 2921697	A1	19791206	DE 1979-2921697	19790529 <--
	CA 1122532	A1	19820427	CA 1979-328611	19790529 <--
	SE 7904723	A	19791201	SE 1979-4723	19790530 <--
	AU 7947582	A	19791206	AU 1979-47582	19790530 <--
	AU 521916	B2	19820506		
	GB 2021949	A	19791212	GB 1979-18883	19790530 <--
	GB 2021949	B	19821117		
	ZA 7902691	A	19800730	ZA 1979-2691	19790530 <--
	US 4282204	A	19810804	US 1979-43626	19790530 <--
	NL 7904316	A	19791204	NL 1979-4316	19790531 <--
	JP 54157842	A	19791213	JP 1979-68772	19790531 <--
	FR 2427096	A1	19791228	FR 1979-13979	19790531 <--
	FR 2427096	B1	19821015		
	IN 150300	A1	19820904	IN 1979-CA564	19790531 <--
PRAI	GB 1978-25870	A	19780531	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 92:64789

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L14 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2010 ACS ON STN

TI Quaternary ammonium galactomannan gum ethers

AB Guar gum reacts with quaternary ammonium comds. in the presence of a base to give guar ethers of varying degrees of substitution (d.s.). For example, 100 g. com. guar flour is added to a Readco double-blade mixer of 1-qt. capacity. Then 100 ml. H2O containing 2 g. NaOH and 7.6 g. (or 0.1 equivalent) of 2,3-epoxypropyltrimethylammonium chloride is added dropwise. The jacket is heated to 55° for 2 hrs. The reacted product is then removed, dried, and ground to pass a 30-mesh screen. These quaternary ammonium guar gum ethers are not only useful in imparting dry strength to paper, but also reduce the drainage time at the wire when used in an amount of 0.5-10 lb./ton of dry pulp. The best dry strength and drainage times result when ether substitution is 0.075-0.10.

AN 1969:69446 HCAPLUS <<LOGINID::20101221>>

DN 70:69446

OREF 70:13029a,13032a

TI Quaternary ammonium galactomannan gum ethers

PA General Mills Inc.

SO Brit., 8 pp.

CODEN: BRXXAA

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1136842		19681218	GB 1966-10641	19660310 <--
PRAI	US		19650324	<--	
OSC.G	4	THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)			

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FILE 'REGISTRY' ENTERED AT 13:41:31 ON 21 DEC 2010

EXP GALACTOMANNAN/CN  
L1 1 S E3  
EXP TARA/CN  
L2 1 S E7  
EXP GUAR GUM/CN  
L3 1 S E3  
EXP LOCUST BEAN GUM/CN  
L4 1 S E3

FILE 'HCAPLUS' ENTERED AT 13:42:40 ON 21 DEC 2010

L5 15760 S L1-L4  
L6 231476 S (QUATERNARY AMMONIUM) OR CATIONIC  
L7 1674 S L5 AND L6  
L8 3718 S GALACTOMANNAN  
L9 162 S L7 AND L8  
L10 110 S L9 AND (PY<2005 OR AY<2005 OR PRY<2005)

FILE 'STNGUIDE' ENTERED AT 13:43:57 ON 21 DEC 2010

FILE 'HCAPLUS' ENTERED AT 13:44:22 ON 21 DEC 2010

L11 15 S ((QUATERNARY AMMONIUM) OR (TRIMETHYLAMMONIUM) OR TRIALKYLAMMO  
L12 105 S ((QUATERNARY AMMONIUM) OR (TRIMETHYLAMMONIUM) OR TRIALKYLAMMO  
L13 74 S L12 AND (PY<2005 OR AY<2005 OR PRY<2005)  
L14 12 S L8 AND L13

=> log hold

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-10.20	-10.20

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 COPYRIGHT (C) 2010 AMERICAN CHEMICAL SOCIETY (ACS)

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FULL ESTIMATED COST	45.93	75.02
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-10.20	-10.20

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=> s purified or purification or refined or refining or separation
    487916 PURIFIED
    403630 PURIFICATION
    106320 REFINED
    172696 REFINING
    264465 SEPARATION
L15  1302860 PURIFIED OR PURIFICATION OR REFINED OR REFINING OR SEPARATION
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=> s 15 and 115
L16      716 L5 AND L15
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=> s 18 and 115
L17      385 L8 AND L15
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=> s (quaternary ammonium) or trimethylammonium or triethylammonium or
trialkylammonium or cationic
    159427 QUATERNARY
    495696 AMMONIUM
    79594 QUATERNARY AMMONIUM
        (QUATERNARY (W)AMMONIUM)
    12597 TRIMETHYLAMMONIUM
    3934 TRIETHYLAMMONIUM
    832 TRIALKYLAMMONIUM
    164926 CATIONIC
L18  242968 (QUATERNARY AMMONIUM) OR TRIMETHYLAMMONIUM OR TRIETHYLAMMONIUM
        OR TRIALKYLAMMONIUM OR CATIONIC
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=> s 117 and 117
L19      385 L17 AND L17
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=> s 117 and 118
L20      17 L17 AND L18
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L120 NOT FOUND
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of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).
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=> s 120 and (PY<2005 or AY<2005 or PRY<2005)
    25159898 PY<2005
    5176428 AY<2005
    4657096 PRY<2005
L21      9 L20 AND (PY<2005 OR AY<2005 OR PRY<2005)
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```
=> d 121 ti abs bib
```

```
L21  ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2010 ACS ON STN
TI   Personal care composition comprising particulate zinc material, pyrrhione
      and cationic polymer, for treating microbial and fungal
```

infections on skin or scalp such as dandruff  
 AB The present invention relates to a composition comprising a composition  
 comprising  
 an effective amount of a particulate zinc material; an effective amount of a  
 surfactant including a surfactant with an anionic functional group; an  
 effective amount of a pyrrithione or a polyvalent metal salt of a pyrrithione;  
 from about 0.025% to about 5% by weight of a water soluble or dispersible,  
 cationic, non-crosslinked, conditioning homopolymer having a  
 cationic charge d. of from about 2 meq/gm to about 10 meq/gm; and  
 from about 20% to about 95% of an aqueous carrier, by weight of said  
 composition More

particularly, the present invention relates to personal care compns. and  
 methods of treating microbial and fungal infections on the skin or scalp.  
 Even more particularly, the present invention relates to methods for the  
 treatment of dandruff and compns., which provide improved antidandruff  
 activity and improved conditioning. Thus, antimicrobial shampoo composition  
 comprised (in wt%): sodium lauryl sulfate 2.0, decyl glucoside 10.0,  
 cocamidopropylbetaine 2.0, cocamide MEA 0.80, cetyl alc. 0.80, HMM Maptac  
 (Rhodia) 0.40, trihydroxystearin 0.25, zinc pyrithione 1.0, zinc  
 hydroxysulfate 2.0, magnesium sulfate 0.28, sodium benzoate 0.25, benzyl  
 alc. .0225, dimethicone 1.0, polymethylsilsesquioxane 1.20, water and  
 minors Q.S. to 100 %.

AN 2008:1045417 HCAPLUS <<LOGINID::20101221>>

DN 149:315697

TI Personal care composition comprising particulate zinc material, pyrithione  
 and cationic polymer, for treating microbial and fungal  
 infections on skin or scalp such as dandruff

IN Schwartz, James Robert; Johnson, Eric Scott; King, Bonnie Theresa;  
 Margraf, Carl Hinz; Tomos, Gregory V.; Warnke, David Thomas; Chang,  
 Deborah W.; Dunlop, David Scott; Labitzke, Kevin M.; Murawski, Sandra Lou;  
 Gore, William Jeffrey; Verbrugge, Theodore Jay; Brown, Mark Anthony;  
 Coffindaffer, Timothy Woodrow; Asante, Afua Asiedua; Wells, Robert Lee;  
 Manuel, Teresa Cuasay; Geary, Nicholas William; Asare, Martin

PA The Procter & Gamble Company, USA

SO U.S. Pat. Appl. Publ., 30pp., Cont.-in-part of U.S. Ser. No. 216,520.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 18

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080206355	A1	20080828	US 2007-890684	20070807 <--
	US 20030223951	A1	20031204	US 2003-454234	20030604 <--
	CA 2484973	A1	20031211	CA 2003-2484973	20030604 <--
	CA 2682799	A1	20031211	CA 2003-2682799	20030604 <--
	AU 2003273287	A1	20031219	AU 2003-273287	20030604 <--
	EP 1509192	A1	20050302	EP 2003-741870	20030604 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1658824	A	20050824	CN 2003-812993	20030604 <--
	JP 2005529159	T	20050929	JP 2004-508768	20030604 <--
	US 20040223941	A1	20041111	US 2004-802166	20040317 <--
	CN 101199450	A	20080618	CN 2007-10199625	20040318 <--
	MX 2004011710	A	20050214	MX 2004-11710	20041125 <--
	US 20050202984	A1	20050915	US 2005-100648	20050407 <--
	US 20060024381	A1	20060202	US 2005-216520	20050831 <--
FRAI	US 2002-385794P	P	20020604	<--	
	US 2003-455963P	P	20030318	<--	
	US 2003-454234	B2	20030604	<--	
	US 2004-802166	A2	20040317	<--	
	US 2005-100648	A2	20050407		



US 2005-216520	A2	20050831	
CA 2003-2484973	A3	20030604	<--
WO 2003-US17555	W	20030604	<--
CN 2004-80006595	A3	20040318	<--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

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FULL ESTIMATED COST	63.97	93.06
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-11.05	-11.05

=> d 121 2-9 ti abs bib

L21 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Cation-modified purified guar gum, and cosmetics containing it  
AB The cation-modified purified guar gum, useful for cosmetics (including hair preps.), is obtained by substitution of part of OH groups of purified guar gum (galactomannan content  $\geq 90$  weight%, turbidity of 1 weight% aqueous solution  $\leq 15\%$ ) composed of backbones comprising mannose units and side chains comprising galactose units (mannose:galactose composition ratio 2:1) with quaternary ammonium-containing groups  $O(R40)nCH_2CH(OH)CH_2N^+R1R2R3$  X- [R1, R2 = C1-3 alkyl; R3 = C1-24 alkyl; X- = anion; n = 0, 1-30; when n = 1-30, then (R40)n = polyalkylene glycol chain comprising  $\geq 1$  kind of C2-4 alkylene oxide units], has cation-exchange capacity (CEC; derived from the quaternary ammonium groups) 0.1-3 mequiv/g, and shows turbidity of 1% aqueous solution  $\leq 15\%$ . Purified guar gum (galactomannan content 97 weight%, turbidity of 1 weight% aqueous solution 5.0%) was treated with glycidyltrimethylammonium chloride to give cation-modified purified guar gum (CEC 0.91 mequiv/g, turbidity of 1 weight% aqueous solution 4.8%). A shampoo containing 0.3 weight% of the cation-modified purified guar gum showed good hair-smoothing effect.

AN 2006:627633 HCAPLUS <<LOGINID:20101221>>  
DN 145:89412  
TI Cation-modified purified guar gum, and cosmetics containing it  
IN Mori, Yoshihiko; Takeda, Hiromitsu; Suzuki, Akio  
PA Toho Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 38 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006169410	A	20060629	JP 2004-365130	20041216 <--

L21 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2010 ACS ON STN

TI Use of plant gums, including modified and insoluble plant gums, for the elimination of natural organic substances from liquids

AB Natural organic compds. such as humic acid, fulvic acids, proteins, carbohydrates, amino acids, or peptides are removed from natural water, wastewaters, industrial waters, drinking water, fruit juices, syrups, and other water-based foods using plant gums or modified plant gums. The gums may be glucomannans such as Konjac, xyloglucans such as tamarind gum, galactomannans such as guar gum, carob gum, tara, fenugreek, or mesquite gum, or gum arabic or their mixts. The starch may be modified with cationic or cationizable groups by nucleophilic substitution, by esterification, or by polymerization

AN 2005:1351099 HCAPLUS &lt;&lt;LOGINID::20101221&gt;&gt;

DN 144:93718

TI Use of plant gums, including modified and insoluble plant gums, for the elimination of natural organic substances from liquids

IN Mabilie, Caroline; Sassi, Jean Francois; Mottot, Yves; Monin, Vincent

PA Rhodia Consumer Specialties Ltd., UK

SO Fr. Demande, 45 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2872064	A1	20051230	FR 2004-7143	20040629 <--
	FR 2872064	B1	20071109		
	WO 2006010850	A1	20060202	WO 2005-FR1638	20050628 <--
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	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	EP 1778395	A1	20070502	EP 2005-779695	20050628 <--
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	US 20090098262	A1	20090416	US 2008-630723	20080815 <--
PRAI	FR 2004-7143	A	20040629 <--		
	WO 2005-FR1638	W	20050628		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 144:93718

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2010 ACS ON STN

TI Cationic, oxidized polysaccharides in conditioning applications

AB A cationic, oxidized polysaccharide or derivative thereof that has a mean average mol. weight (MW) between 50,000 and 1,000,000 and an aldehyde functionality content of at least 0.001 meq/g is used in personal care and household care compns. This cationic, oxidized polysaccharide is prepared in continuous or batch processes using hydrolytic reagents,

oxidizing reagents, or combination of hydrolytic reagents and oxidizing reagents. Personal care or household care compns. are prepared by adding the cationic, oxidized polysaccharide to a personal care or household composition containing at least one active ingredient other than the cationic, oxidized polysaccharide of this invention. For example, a shampoo formulation containing a cationic, oxidized guar polymer (MW 50200, cationic degree of substitution 0.18) 0.5%, together with HPMC 0.5%, Amphosol CA 12%, Rhodapex ES STD 35%, and Glydant 0.5%, improved detangling of wet and dry hair by 62% and 35%, resp., when compared with the shampoo containing no polymer.

2005:1106786 HCAPLUS <<LOGINID::20101221>>

AN 143:372822

DN Cationic, oxidized polysaccharides in conditioning applications

IN Eraso-Majewicz, Paquita; Modi, Jashawant J.; Xu, Zu-Feng

PA Hercules Incorporated, USA

SO U.S. Pat. Appl. Publ., 29 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050227902	A1	20051013	US 2004-821013	20040408 <--
	US 7589051	B2	20090915		
PRAT	US 2004-821013		20040408	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2010 ACS ON STN

TI Cation-modified purified galactomannan polysaccharide

and cosmetic composition containing the substance

AB The invention relates to a cationic polymer which, when incorporated in a hair treatment composition, produces an excellent conditioning effect and which, when incorporated in a body detergent composition, improves lathering and lather quality and gives a satisfactory use feeling. A cation-modified purified galactomannan polysaccharide has a main chain comprising structural units derived from mannose and side chains comprising galactose units, wherein the content of galactomannans in which the mannose/galactose proportion is 4/1 and/or 3/1 is 80% by mass or higher and part of the hydroxy groups of the polysaccharide have been replaced with a quaternary N-containing group.

2005:732673 HCAPLUS <<LOGINID::20101221>>

AN 143:195518

DN Cation-modified purified galactomannan polysaccharide

and cosmetic composition containing the substance

IN Takeda, Hiromitsu; Mori, Yoshihiko; Ueda, Hiromichi

PA Toho Chemical Industry Co., Ltd., Japan

SO PCT Int. Appl., 65 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005073255	A1	20050811	WO 2005-JP995	20050126 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,  
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

EP 1739095 A1 20070103 EP 2005-704132 20050126 <--  
 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

CN 1914229 A 20070214 CN 2005-80003656 20050126 <--  
 CN 100519587 C 20090729  
 IN 2006DN04370 A 20070713 IN 2006-DN4370 20060728 <--  
 KR 2006132709 A 20061221 KR 2006-7017468 20060829 <--  
 US 20070172441 A1 20070726 US 2006-587526 20060915 <--

PRAI JP 2004-24894 A 20040130 <--  
 WO 2005-JP995 W 20050126

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)  
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2010 ACS ON STN  
 TI Galactomannan compositions and methods for making and using same  
 AB The present invention relates to compns. comprising galactomannan  
 and its derivs. (hydroxypropyl galactomannan) prepared by the  
 steps of spraying substantially dry galactomannan or its derivative  
 with a liquid cleaving agent (H2O2) and mixing, where the substrate is the  
 major solid component by weight in the mixing step and the moisture content  
 of the mixture during the mixing step is not more than 25% of the weight of the  
 dry substrate. The present invention also relates to compns. comprising  
 hydroxypropyl galactomannan having a specific polydispersity  
 index, weight average mol. weight and viscosity in solution The present  
 invention also  
 provides for the use of the compns. according to this invention in the  
 manufacture of cosmetics, foodstuffs, drugs, paper, tobacco products or  
 explosives, or in the printing or dyeing of textiles, mining, or treating  
 water (no data).

AN 2002:964397 HCAPLUS <<LOGINID:20101221>>  
 DN 138:26016  
 TI Galactomannan compositions and methods for making and using same  
 IN Magallanes, Jesse; Diguet, Sylvain; Stivers, William  
 PA Rhodia, Inc., USA  
 SO PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002100902	A1	20021219	WO 2002-US18455	20020610 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
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AU 2002315041	A1	20021223	AU 2002-315041	20020610 <--
US 20030045708	A1	20030306	US 2002-170113	20020610 <--

US 6884884 B2 20050426  
 EP 1417240 A1 20040512 EP 2002-741978 20020610 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 US 20050164892 A1 20050728 US 2005-88113 20050322 <--  
 PRAI US 2001-297345P P 20010611 <--  
 US 2002-170113 A3 20020610 <--  
 WO 2002-US18455 W 20020610 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)  
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI X-ray contrast compositions containing film-forming materials  
 AB Disclosed are x-ray contrast compns. for oral or retrograde examination of the  
 gastrointestinal tract comprising a polymeric material capable of forming  
 a coating on the gastrointestinal tract and a nonionic x-ray producing  
 agent in a pharmaceutically acceptable carrier; and methods for their use  
 in diagnostic radiol. of the gastrointestinal tract. For example, an  
 emulsion contained 2,4,6-triiodophenol sec-octyl ether 2.50, Dow Corning  
 Antifoam AF emulsion 3.50, galactan sulfate 0.5, Ca lactate 0.5g, and  
 purified water to 10 mL.  
 AN 1995:573986 HCAPLUS <<LOGINID::20101221>>  
 DN 122:299105  
 OREF 122:54325a,54328a  
 TI X-ray contrast compositions containing film-forming materials  
 IN Illig, Carl R.; Toner, John L.  
 PA Sterling Winthrop Inc., USA  
 SO U.S., 10 pp. Cont.-in-part of U.S. Ser. No. 877,690, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 27

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5405600	A	19950411	US 1993-104744	19930811 <--
	CA 2094893	A1	19931102	CA 1993-2094893	19930426 <--
	NO 9301595	A	19931102	NO 1993-1595	19930430 <--
	AU 9338315	A	19931104	AU 1993-38315	19930430 <--
	JP 06025016	A	19940201	JP 1993-104067	19930430 <--
	HU 64700	A2	19940228	HU 1993-1270	19930430 <--
	US 5443814	A	19950822	US 1994-206552	19940304 <--
	US 5476646	A	19951219	US 1994-230580	19940421 <--
PRAI	US 1992-877690	B2	19920501	<--	
	US 1993-104744	A2	19930811	<--	
	US 1994-206552	A2	19940304	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OS MARPAT 122:299105  
 OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)  
 RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Carboxymethylated galactomannan products as pharmaceutical  
 excipients. 3. Carboxymethyl galactomannans as matrix formers for  
 sustained release formulations  
 AB The ability of CM-Carubin [37251-19-7] and CM-guar [51198-15-3] to form  
 gels with AlCl3, Al2SO4, CaCl2, and pilocarpine-HCl [54-71-7] was  
 compared with that of Na alginate, CM-starch, and Eudragit L or S in  
 combination with NaOH. Gels formed as easily with the

galactomannan [11078-30-1] preps. as with the alginate, and better than with the other anionic colloids. The gel matrix formed with procaine-HCl [51-05-8] released the drug uniformly in dialysis expts. The viscosity of CM guar and crude and purified CM-Carubin in gastric juice (with or without pepsin), artificial intestinal juice (with or without pancreatin), and artificial tears (with or without lysozyme) increased rapidly to a maximum in ≤5 h and then was stable for .apprx.20 h. The viscosity was maximum with the crude CM-Carubin and least with CM-guar. The enzymes had no effect on viscosity.

AN 1984:597999 HCAPLUS <<LOGINID::20101221>>

DN 101:197999

OREF 101:29915a,29918a

TI Carboxymethylated galactomannan products as pharmaceutical excipients. 3. Carboxymethyl galactomannans as matrix formers for sustained release formulations

AU Nuernberg, E.; Pruetting, D.

CS Inst. Pharm. Lebensmittelchem., Friedrich-Alexander-Univ., Erlangen-Nuernberg, Fed. Rep. Ger.

SO Pharmazeutische Industrie (1984), 46(2), 184-6

CODEN: PHINAN; ISSN: 0031-711X

DT Journal

LA German

L21 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Purification of flotation tailings water

AB Tailings slurry from fluorspar [14542-23-5] flotation is clarified and purified by sequential addition of a cationic

polygalactomannan derivative and polyethylene oxide. [25322-68-3].

AN 1981:180258 HCAPLUS <<LOGINID::20101221>>

DN 94:180258

OREF 94:29409a,29412a

TI Purification of flotation tailings water

IN Wilson, Martin

PA United States Borax and Chemical Corp., USA

SO U.S., 3 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 4248708	A	19810203	US 1979-69415	19790824 <--
	CA 1143243	A1	19830322	CA 1980-353857	19800612 <--
	GB 2058034	A	19810408	GB 1980-22089	19800704 <--
	GB 2058034	B	19830309		
PRAI	US 1979-69415	A	19790824	<--	

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

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COST IN U.S. DOLLARS

SINCE FILE TOTAL

ENTRY SESSION

FULL ESTIMATED COST

88.77 117.86

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL

ENTRY SESSION

CA SUBSCRIBER PRICE

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PASSWORD:

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	ENTRY	SESSION
FULL ESTIMATED COST	88.77	117.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
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CA SUBSCRIBER PRICE	-17.85	-17.85

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	88.77	117.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-17.85	-17.85

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DICTIONARY FILE UPDATES: 20 DEC 2010 HIGHEST RN 1257203-13-6

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experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=> exp glycidyltrimethylammonium/cn

E1	1	GLYCIDYLTRIMETHOXYSILANE/CN
E2	1	GLYCIDYLTRIMETHOXYSILANE-PHENYLTRIMETHOXYSILANE-METHYLTRIMET HOXYSILANE COPOLYMER/CN

E3 1 --> GLYCIDYLTRIMETHYLAMMONIUM/CN  
E4 1 GLYCIDYLTRIMETHYLAMMONIUM ACETATE/CN  
E5 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE /CN  
E6 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -HEXAMETHYLENEDIAMINE-POLY (ETHYLENE GLYCOL) DIGLYCIDYL ETHER COPOLYMER/CN  
E7 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -POLY (ETHYLENE GLYCOL) BIS (3-AMINOPROPYL) ETHER-POLY (ETHYLENE GLYCOL) DIGLYCIDYL ETHER COPOLYMER/CN  
E8 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -POLY (ETHYLENE GLYCOL) BIS (3-AMINOPROPYL) ETHER-POLY (PROPYLENE GLYCOL) DIGLYCIDYL ETHER COPOLYMER/CN  
E9 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -POLY (ETHYLENE GLYCOL) DIGLYCIDYL ETHER-POLY (PROPYLENE GLYCOL) BIS (2-AMINOPROPYL) ETHER COPOLYMER/CN  
E10 1 GLYCIDYLTRIMETHYLAMMONIUM BROMIDE/CN  
E11 1 GLYCIDYLTRIMETHYLAMMONIUM CHLORIDE/CN  
E12 1 GLYCIDYLTRIMETHYLAMMONIUM CHLORIDE-N-VINYLMIDAZOLE-N-VINYLPYRROLIDONE COPOLYMER/CN

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E3 0 --> GLYCIDYLTRIMETHYLAMMONIUM GUAR/CN  
E4 1 GLYCIDYLTRIMETHYLPHOSPHONIUM BROMIDE/CN  
E5 1 GLYCIFON/CN  
E6 1 GLYCIN CLEAVAGE SYSTEM H PROTEIN (NATRONOMONAS PHARAONIS STRAIN DSM 2160 GENE GCVH)/CN  
E7 1 GLYCIN RICH PROTEIN (LEIFSONIA XYLI XYLI STRAIN CTCB07)/CN  
E8 1 GLYCIN THEOPHYLLINATE/CN  
E9 1 GLYCIN-RICH SIGNAL PEPTIDE PROTEIN (RALSTONIA SOLANACEARUM STRAIN GM11000 GENE RSC0443)/CN  
E10 1 GLYCIN-RICH TRANSMEMBRANE PROTEIN (RALSTONIA SOLANACEARUM STRAIN GM11000 GENE RSP0506)/CN  
E11 1 GLYCINAGEL A/CN  
E12 1 GLYCINAGEL S/CN

=> exp glycidyltrimethylammonium/cn

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E2 1 GLYCIDYLTRIMETHOXYSILANE-PHENYLTRIMETHOXYSILANE-METHYLTRIMETHOXYSILANE COPOLYMER/CN  
E3 1 --> GLYCIDYLTRIMETHYLAMMONIUM/CN  
E4 1 GLYCIDYLTRIMETHYLAMMONIUM ACETATE/CN  
E5 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE /CN  
E6 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -HEXAMETHYLENEDIAMINE-POLY (ETHYLENE GLYCOL) DIGLYCIDYL ETHER COPOLYMER/CN  
E7 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -POLY (ETHYLENE GLYCOL) BIS (3-AMINOPROPYL) ETHER-POLY (ETHYLENE GLYCOL) DIGLYCIDYL ETHER COPOLYMER/CN  
E8 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -POLY (ETHYLENE GLYCOL) BIS (3-AMINOPROPYL) ETHER-POLY (PROPYLENE GLYCOL) DIGLYCIDYL ETHER COPOLYMER/CN  
E9 1 GLYCIDYLTRIMETHYLAMMONIUM BIS (TRIFLUOROMETHANESULFONYL) IMIDE -POLY (ETHYLENE GLYCOL) DIGLYCIDYL ETHER-POLY (PROPYLENE GLYCOL) BIS (2-AMINOPROPYL) ETHER COPOLYMER/CN  
E10 1 GLYCIDYLTRIMETHYLAMMONIUM BROMIDE/CN  
E11 1 GLYCIDYLTRIMETHYLAMMONIUM CHLORIDE/CN



E12 1 GLYCIDYLTRIMETHYLAMMONIUM CHLORIDE-N-VINYLMIDAZOLE-N-VINYL  
YRROLIDONE COPOLYMER/CN

=> s e10-e11

1 "GLYCIDYLTRIMETHYLAMMONIUM BROMIDE"/CN  
1 "GLYCIDYLTRIMETHYLAMMONIUM CHLORIDE"/CN  
L22 2 ("GLYCIDYLTRIMETHYLAMMONIUM BROMIDE"/CN OR "GLYCIDYLTRIMETHYLAMM  
ONIUM CHLORIDE"/CN)

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	11.98	129.84
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-17.85

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FILE COVERS 1907 - 21 Dec 2010 VOL 153 ISS 26  
FILE LAST UPDATED: 20 Dec 2010 (20101220/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2010  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2010

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=> s l22

L23 1227 L22

=> s l17 and l22

1227 L22

L24 6 L17 AND L22

=> d l24 1-6 ti abs bib

L24 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2010 ACS ON STN  
TI Cationic purified tara gum having quaternary ammonium groups and

cosmetics containing them

AB The cationic tara gum derivs. are manufactured by substitution of a part of OH groups of purified tara gum (I), which contains  $\geq 90\%$  galactomannan with mannose-galactose ratio 3:1 and shows turbidity of the 1% aqueous solution  $\leq 15\%$ , with  $O(R_4O)nCH_2CH(OH)CH_2N+R_1R_2R_3 X^-$  ( $R_1, R_2 = C_1-3$  alkyl;  $R_3 = C_1-24$  alkyl;  $X^- =$  anion;  $n = 0-30$ ; if  $n = 1-30$ , then  $(R_4O)n =$  poly( $C_2-4$  alkylene oxide) residue), wherein amount of the quaternary ammonium group-derived cations is 0.1-3.0 meq/g and turbidity of 1% aqueous solution of the tara gum after quaternary ammonium group introduction is  $\leq 15\%$ . Also claimed are cosmetics, especially hair preps., containing the cationic tara gum and optional water-soluble cationic polymers and/or water-soluble amphoteric polymers, amidoamine and organic acids and/or inorg. acids as neutralizers, higher fatty acids and/or higher alcs., etc. Thus, purified I was gradually added to a mixture of an aqueous NaOH solution and an aqueous  $Me_2CHOH$  solution and the aqueous dispersion was treated with glycidyltrimethylammonium chloride at  $50^\circ$  for 3 h to give cationic tara gum derivative, whose 1% aqueous solution showed turbidity 3.9%.

A shampoo containing the derivative showed smooth finger-combining property in rinsing.

AN 2006:943890 HCAPLUS <<LOGINID:20101221>>

DN 145:320772

TI Cationic purified tara gum having quaternary ammonium groups and cosmetics containing them

IN Mori, Yoshihiko; Otsusaka, Saori; Suzuki, Akio

PA Toho Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 42pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006241330	A	20060914	JP 2005-59742	20050303
PRAI	JP 2005-59742		20050303		

L24 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Cationically-modified locust bean gum, and cosmetic composition containing the same

AB The invention relates to a cationically-modified locust bean gum providing hair-conditioning effect and good feeling upon usage, suitable for use in various hair/skin cosmetic composition, wherein the locust bean gum is a purified locust bean gum containing galactomannan (mannose: galactose 4:1)  $\geq 90\%$ , and the part of the OH group of the purified locust bean gum is substituted with a quaternary nitrogen-containing group  $-O-(R_4O)nCH_2CH(OH)CH_2N+R_1R_2R_3 X^-$  ( $R_1, R_2 = C_1-3$  alkyl;  $R_3 = C_1-24$  alkyl;  $X^- =$  anion;  $n = 0$  or  $n = 1-30$  wherein when  $n = 1-30$ ,  $(R_4O)n = C_2-4$  polyalkylene glycol chain). The cationic charge derived from the quaternary nitrogen-containing group is 0.1-3 meq/g, and the turbidity of a solution containing cationically-modified purified locust bean gum 1% is  $\leq 15\%$ . For example, a purified locust bean gum (galactomannan  $\geq 97\%$ ) was reacted with glycidyltrimethylammonium chloride to obtain a cationically-modified locust bean gum. The modified locust bean gum showed elec. charge 0.9 meq/g, and its 1% solution showed a turbidity 4.9%. The modified locust bean gum 0.3 parts was mixed with cationic water-soluble polymer (Catinal HC-100) 0.3, amphoteric water-soluble polymer (Yukaformer SM) 0.2, polyoxyethylene lauryl ether sulfate sodium salt 10, coco fatty acid amidopropylbetaine 3.5, coco fatty acid monoethanolamide 2.5, sodium edetate 0.1, sodium benzoate 0.1, citric acid solution q.s. to pH 5.5-6, and

water balance to 100 parts to give a shampoo composition  
 AN 2006:941026 HCAPLUS <<LOGINID:20101221>>  
 DN 145:320769  
 TI Cationically-modified locust bean gum, and cosmetic composition containing  
 the same  
 IN Mori, Yoshihiko; Otsusaka, Saori; Suzuki, Akio  
 PA Toho Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 43pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006241082	A	20060914	JP 2005-59741	20050303
PRAI	JP 2005-59741		20050303		
OSC.G	1	THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)			

L24 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2010 ACS ON STN  
 TI Cation-modified purified guar gum, and cosmetics containing it  
 AB The cation-modified purified guar gum, useful for cosmetics  
 (including hair preps.), is obtained by substitution of part of OH groups  
 of purified guar gum (galactomannan content  $\geq 90$   
 weight%, turbidity of 1 weight% aqueous solution  $\leq 15\%$ ) composed of backbones  
 comprising mannose units and side chains comprising galactose units  
 (mannose:galactose composition ratio 2:1) with quaternary ammonium-containing  
 groups O(R4O)nCH2CH(OH)CH2N+R1R2R3 X- [R1, R2 = C1-3 alkyl; R3 = C1-24  
 alkyl; X- = anion; n = 0, 1-30; when n = 1-30, then (R4O)n = polyalkylene  
 glycol chain comprising  $\geq 1$  kind of C2-4 alkylene oxide units], has  
 cation-exchange capacity (CEC; derived from the quaternary ammonium  
 groups) 0.1-3 mequiv/g, and shows turbidity of 1% aqueous solution  $\leq 15\%$ .  
 Purified guar gum (galactomannan content 97 weight%,  
 turbidity of 1 weight% aqueous solution 5.0%) was treated with  
 glycidyltrimethylammonium chloride to give cation-modified  
 purified guar gum (CEC 0.91 mequiv/g, turbidity of 1 weight% aqueous  
 solution 4.8%). A shampoo containing 0.3 weight% of the cation-modified  
 purified guar gum showed good hair-smoothing effect.

AN 2006:627633 HCAPLUS <<LOGINID:20101221>>  
 DN 145:89412  
 TI Cation-modified purified guar gum, and cosmetics containing it  
 IN Mori, Yoshihiko; Takeda, Hiromitsu; Suzuki, Akio  
 PA Toho Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 38 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006169410	A	20060629	JP 2004-365130	20041216
PRAI	JP 2004-365130		20041216		

L24 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2010 ACS ON STN  
 TI Use of plant gums, including modified and insoluble plant gums, for the  
 elimination of natural organic substances from liquids  
 AB Natural organic compds. such as humic acid, fulvic acids, proteins,  
 carbohydrates, amino acids, or peptides are removed from natural water,  
 wastewaters, industrial waters, drinking water, fruit juices, syrups, and  
 other water-based foods using plant gums or modified plant gums. The gums  
 may be glucomannans such as Konjac, xyloglucans such as tamarind gum,  
 galactomannans such as guar gum, carob gum, tara, fenugreek, or mesquite

gum, or gum arabic or their mixts. The starch may be modified with cationic or cationizable groups by nucleophilic substitution, by esterification, or by polymerization

AN 2005:1351099 HCAPLUS <<LOGINID:20101221>>

DN 144:93718

TI Use of plant gums, including modified and insoluble plant gums, for the elimination of natural organic substances from liquids

IN Mabilie, Caroline; Sassi, Jean Francois; Mottot, Yves; Monin, Vincent

PA Rhodia Consumer Specialties Ltd., UK

SO Fr. Demande, 45 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2872064	A1	20051230	FR 2004-7143	20040629
	FR 2872064	B1	20071109		
	WO 2006010850	A1	20060202	WO 2005-FR1638	20050628
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	EP 1778395	A1	20070502	EP 2005-779695	20050628
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	US 20090098262	A1	20090416	US 2008-630723	20080815
PRAI	FR 2004-7143	A	20040629		
	WO 2005-FR1638	W	20050628		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 144:93718

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2010 ACS ON STN

TI Cation-modified purified galactomannan polysaccharide

and cosmetic composition containing the substance

AB The invention relates to a cationic polymer which, when incorporated in a hair treatment composition, produces an excellent conditioning effect and which, when incorporated in a body detergent composition, improves lathering and lather quality and gives a satisfactory use feeling. A

cation-modified purified galactomannan polysaccharide

has a main chain comprising structural units derived from mannose and side chains comprising galactose units, wherein the content of galactomannans in which the mannose/galactose proportion is 4/1 and/or 3/1 is 80% by mass or higher and part of the hydroxy groups of the polysaccharide have been replaced with a quaternary N-containing group.

AN 2005:732673 HCAPLUS <<LOGINID:20101221>>

DN 143:195518

TI Cation-modified purified galactomannan polysaccharide and cosmetic composition containing the substance

IN Takeda, Hiromitsu; Mori, Yoshihiko; Ueda, Hiromichi

PA Toho Chemical Industry Co., Ltd., Japan  
 SO PCT Int. Appl., 65 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005073255	A1	20050811	WO 2005-JP995	20050126
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1739095	A1	20070103	EP 2005-704132	20050126
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
CN 1914229	A	20070214	CN 2005-80003656	20050126
CN 100519587	C	20090729		
IN 2006DN04370	A	20070713	IN 2006-DN4370	20060728
KR 2006132709	A	20061221	KR 2006-7017468	20060829
US 20070172441	A1	20070726	US 2006-587526	20060915
PRAI JP 2004-24894	A	20040130		
WO 2005-JP995	W	20050126		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)  
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2010 ACS ON STN  
 TI Separation of flours containing polysaccharides into fractions rich in proteins and poor in proteins  
 AB Suspending the title flours in a liquid whose d. is intermediate between those of the title fractions seps. these fractions, since the lighter protein fraction floats up and the heavier protein fraction sinks. Thus, 7.5 kg guar splits (a meal of guar seed endosperm with the external aleurone-like layer) was suspended in 20 L trichloroethylene [79-01-6] (d. 1480 kg/m3) and within ≥30 min of standing the inner endosperm fraction (d. 1484-1507 kg/m3) sank, whereas the aleurone-like layer (d. 1300-1450 kg/m3) floated up. The separation increased the viscosity of the heavy fraction by ≥20% above that of the current com. available products and improved clarity, which increased its value for the food industry and for further processing to galactomannan ethers and esters and depolymn. The light fraction had adequate viscosity for paper and textile industry. Thus, 2.5 kg of the above heavy fraction was converted to a highly viscous hydroxypropyl derivative by reaction with 565 g propylene oxide [75-56-9] at 70-75° in 1300 mL water plus 265 mL 30% NaOH plus 2.5 g borax.

AN 1985:111883 HCAPLUS <<LOGINID:20101221>>  
 DN 102:111883  
 OREF 102:17563a,17566a  
 TI Separation of flours containing polysaccharides into fractions rich in proteins and poor in proteins  
 IN Wielinga, Willem Cor  
 PA Meyhall Chemical A.-G., Switz.

SO Eur. Pat. Appl., 29 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 130946	A2	19850109	EP 1984-810316	19840627
	EP 130946	A3	19850515		
	EP 130946	B1	19880427		
	R: CH, DE, FR, IT, LI, NL				
	CH 666790	A5	19880831	CH 1983-3649	19830701
	GB 2142636	A	19850123	GB 1984-16619	19840629
	GB 2142636	B	19880316		
	CA 1212573	A1	19861014	CA 1984-457865	19840629
	JP 60054646	A	19850329	JP 1984-136421	19840630
	JP 01050387	B	19891030		
	IN 162625	A1	19880618	IN 1985-DE127	19850215
PRAI	CH 1983-3649	A	19830701		
OSC.G	1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)				

=> s 11/pur  
 3092 L1  
 352969 PUR/RL  
 L25 99 L1/PUR  
 (L1 (L) PUR/RL)

=> s 118 and 125  
 L26 1 L18 AND L25

=> s 125 and (PY<2005 or AY<2005 or PRY<2005)  
 25159898 PY<2005  
 5176428 AY<2005  
 4657096 PRY<2005  
 L27 69 L25 AND (PY<2005 OR AY<2005 OR PRY<2005)

=> s cosmetic or shampoo  
 83476 COSMETIC  
 8458 SHAMPOO  
 L28 89686 COSMETIC OR SHAMPOO

	SINCE FILE	TOTAL
=> log hold		
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	24.42	154.26
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.10	-22.95

SESSION WILL BE HELD FOR 120 MINUTES  
 STN INTERNATIONAL SESSION SUSPENDED AT 14:39:11 ON 21 DEC 2010

Connecting via Winsock to STN

Welcome to STN International! Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:

\*\*\*\*\* RECONNECTED TO STN INTERNATIONAL \*\*\*\*\*  
SESSION RESUMED IN FILE 'HCAPLUS' AT 14:41:49 ON 21 DEC 2010  
FILE 'HCAPLUS' ENTERED AT 14:41:49 ON 21 DEC 2010  
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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	24.42	154.26
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.10	-22.95

=> d 127 1-69 ti abs bib

L27 ANSWER 1 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Hydrocolloids and process therefor

AB The present invention relates to substantially pure hydrocolloids and  
derivs. thereof, a method of their production, compns. comprising them and  
their use as gelling and thickening agents for aqueous systems, for instance,  
in the area of food, fodder, cosmetic and pharmaceutical compns. Typical  
hydrocolloids are selected from tamarid, fenugreek, cassia, locust bean,  
tara, and algal hydrocolloids such as carrageenan and alginates. The  
hydrocolloids obtainable by the method of the invention are colorless,  
odorless and tasteless and they exhibit improved performance properties  
such as viscosity properties as well as gel strength and break strength.  
2005:471822 HCAPLUS <<LOGINID:20101221>>

AN  
DN 143:9412

TI Hydrocolloids and process therefor

IN Utz, Ferdinand; Malek, Gabriel

PA Germany

SO U.S. Pat. Appl. Publ., 53 pp., Cont.-in-part of U.S. Ser. No. 871,472.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050118130	A1	20050602	US 2004-7151	20041208 <--
	US 20050075497	A1	20050407	US 2004-871472	20040619 <--
	WO 2006062792	A2	20060615	WO 2005-US43363	20051122 <--
	WO 2006062792	A3	20060727		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	US 20090318571	A1	20091224	US 2009-482858	20090611 <--
PRAI	EP 2003-13933	A	20030620	<--	
	US 2004-871472	A2	20040619	<--	

US 2004-7151 A 20041208 <--  
 ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L27 ANSWER 2 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Co-administration of a polysaccharide with a chemotherapeutic agent for the treatment of cancer  
 AB Disclosed herein are compns. and methods for treating diseases such as cancer. The compns. comprise polysaccharides in an admixt. with one or more therapeutic agents. This admixt. can be administered to a subject in need thereof using any known method of administration. The therapeutic agent, if administered alone, can cause undesirable side-effects in the subject. The polysaccharide component (e.g., galactomannan) minimizes or eliminates these side effects. The compns. described herein effectuate an enhanced therapeutic effect along with reduced toxicity. 5-FU and galactomannan worked synergistically.  
 AN 2005:219721 HCAPLUS <<LOGINID:20101221>>  
 DN 142:285217  
 TI Co-administration of a polysaccharide with a chemotherapeutic agent for the treatment of cancer  
 IN Zomer, Eliezer; Platt, David  
 PA USA  
 SO U.S. Pat. Appl. Publ., 30 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050053664	A1	20050310	US 2003-657508	20030908 <--
	AU 2004272022	A1	20050324	AU 2004-272022	20040907 <--
	AU 2004272022	B2	20101007		
	WO 2005025501	A2	20050324	WO 2004-US28883	20040907 <--
	WO 2005025501	A3	20050519		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1662874	A2	20060607	EP 2004-783211	20040907 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	BR 2004013410	A	20061010	BR 2004-13410	20040907 <--
	CN 1867252	A	20061122	CN 2004-80030017	20040907 <--
	JP 2007505041	T	20070308	JP 2006-525488	20040907 <--
	US 20080207516	A1	20080828	US 2008-36608	20080225 <--
PRAI	US 2003-657508	A	20030908	<--	
	WO 2004-US28883	W	20040907	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

L27 ANSWER 3 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Structural aspects of water-soluble galactomannans isolated from the seeds of Retama raetam  
 AB Two homogeneous galactomannans were isolated from the seeds of Retama raetam, and investigated by using methylation anal., periodate and CrO3



oxidation, NMR spectroscopy, and reaction with *Bandeiraea simplicifolia* lectin and  $\alpha$ -D-galactosidase. The polysaccharide had backbones of (1 $\rightarrow$ 3)- and occasional (1 $\rightarrow$ 4)-linked  $\beta$ -D-mannopyranosyl residues, and side chains, at positions 6, of single  $\alpha$ -D-galactopyranosyl groups. One of the polysaccharides also had a few non-reducing terminal D-mannosyl groups.

AN 2004:745180 HCAPLUS <<LOGINID:20101221>>

DN 142:89792

TI Structural aspects of water-soluble galactomannans isolated from the seeds of *Retama raetam*

AU Ishurd, Omar; Kermagi, Adel; Zgheel, Faraj; Flefla, Mansur; Elmabruk, Mohamed; Wu, Yalin; Kennedy, John F.; Pan, Yuanjiang

CS Department of Chemistry, Zhejiang University, Hangzhou, 310027, Peop. Rep. China

SO Carbohydrate Polymers (2004), 58(1), 41-44

CODEN: CAPOD8; ISSN: 0144-8617

PB Elsevier B.V.

DT Journal

LA English

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 4 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Elucidation of polysaccharide origin in *Ramalina peruviana* symbiosis

AB A structural elucidation of polysaccharides extracted from the aposymbiotically cultured mycobiont of the lichen *Ramalina peruviana* was carried out in order to determine whether the polysaccharides found previously in the symbiotic thalli are produced by the mycobiont or photobiont or both. The mycobiont isolate was cultivated on a solid malt-yeast extract-medium and the freeze-dried colonies were defatted and the polysaccharides extracted successively with hot water and aqueous 2% KOH, each

at 100 °C. The alkaline extract was obtained in much higher yield (31.5%) and submitted to a freeze-thawing treatment, giving rise to a precipitate (PK2) of a mixture of (1  $\rightarrow$  3), (1  $\rightarrow$  4)- $\alpha$ -glucan (1.2:1 ratio, nigeran) and a (1  $\rightarrow$  3)- $\beta$ -glucan (laminaran). The mother liquor was treated with Fehling solution to give a precipitate (galactomannan). This had a (1  $\rightarrow$  6)-linked  $\alpha$ -mannopyranosyl main chain, substituted at O-4 and in small proportion at O-2,4 by  $\beta$ -Galp units. All three polysaccharides have previously been found in the symbiotic thalli of *R. peruviana*, showing that these are produced by the fungus, without the participation of the *Trebouxia* photobiont. Surprisingly, isolichenan, a cold-water soluble (1  $\rightarrow$  3), (1  $\rightarrow$  4)- $\alpha$ -linked-glucan (3:1 ratio) was not found in the isolated mycobiont, despite being the main polysaccharide found in the thalli.

AN 2004:711879 HCAPLUS <<LOGINID:20101221>>

DN 141:391641

TI Elucidation of polysaccharide origin in *Ramalina peruviana* symbiosis

AU Cordeiro, Lucimara M. C.; Stocker-Woergoetter, Elfriede; Gorin, Philip A. J.; Iacomini, Marcello

CS Centro de Ciencias Medicas e Farmaceuticas, Universidade Estadual do Oeste do Parana - UNIOESTE, Cascavel, PR, 85819-110, Brazil

SO FEMS Microbiology Letters (2004), 238(1), 79-84

CODEN: FMLED7; ISSN: 0378-1097

PB Elsevier B.V.

DT Journal

LA English

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 5 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Polysaccharides from Leguminosae. A renewable resource for industrial products  
 AB Vegetable sources of polysaccharides such as guar gum, tara gum, cassia gum, galactomannans, are discussed, with focus on shrubs belonging to the Leguminosae family. Methods for extraction of polysaccharides through environmentally friendly processes, e.g., hydrolysis, depolymn., derivatization with hydrophobic moieties, carboxymethylation, crosslinking, cationization, etc., are described.  
 AN 2004:667759 HCAPLUS <<LOGINID:20101221>>  
 DN 142:200380  
 TI Polysaccharides from Leguminosae. A renewable resource for industrial products  
 AU Baldaro, Eva; Langella, Valentina; Pfeiffer, Ugo  
 CS Unita Tecnologica Guar, Lamberti SpA, Albizzate, Italy  
 SO Chimica e l'Industria (Milan, Italy) (2004), 86(2), 60-63  
 CODEN: CINMAB; ISSN: 0009-4315  
 PB Editrice Bias Sas  
 DT Journal  
 LA Italian

L27 ANSWER 6 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI A process for preparation of some galactomannan poly-sulfate products as new materials exhibiting antifibrinolytic and anticoagulation activities  
 AB Galactomannan poly-sulfate was prepared via sulfation as anticoagulant agent (from soybean and Berseem) and fibrin dissolvent agent (from Lucina and date seeds).  
 AN 2004:645834 HCAPLUS <<LOGINID:20101221>>  
 DN 141:142029  
 TI A process for preparation of some galactomannan poly-sulfate products as new materials exhibiting antifibrinolytic and anticoagulation activities  
 IN Darwish, Mohamed Madel-Din Hussein  
 PA Egypt  
 SO Egypt., 7 pp.  
 CODEN: EGXXXY  
 DT Patent  
 LA Arabic  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EG 21358	A	20010930	EG 1998-407	19980415 <--
PRAI	EG 1998-407		19980415	<--	

L27 ANSWER 7 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Solventless method of isolation and sieving of useful components from fenugreek seeds  
 AB The isolation is done by separating galactomannan-containing albumen from seed coat  
 with a grinder mill by taking advantage of the difference in hardness between them, then milling the albumen in an impact mill or an air-stream mill to give particles with different sizes and then sieving them through a sieve.  
 AN 2004:467926 HCAPLUS <<LOGINID:20101221>>  
 DN 141:8808  
 TI Solventless method of isolation and sieving of useful components from fenugreek seeds  
 IN Tanaka, Toshihisa; Iwamoto, Kenji  
 PA Air Green Co., Ltd., Japan  
 SO PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2

DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004048419	A1	20040610	WO 2002-JP13432	20021220 <--
	WO 2004048419	A9	20041229		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2005341801	A	20051215	JP 2002-344842	20021128 <--
	AU 2002368394	A1	20040618	AU 2002-368394	20021220 <--
PRAI	JP 2002-344842	A	20021128	<--	
	WO 2002-JP13432	W	20021220	<--	

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Composition and Structure of Galactomannan from the Seed of *Gleditsia ferox* Desf.

AB Galactomannan, a heteropolysaccharide with a mol. weight of 1660 kDa, was isolated from the seed of *Gleditsia ferox* Desf., introduced in Russia, with a yield of 18.9%. Its aqueous solns. were optically active ( $[\alpha]_D^{+30.5} = +30.5^\circ$ ) and highly viscous ( $[\eta] = 1430 \text{ mL/g}$ ). An anal. of the heteropolysaccharide using chemical, enzymic, and chromatog. procedures showed that it consists of D-mannopyranose and D-galactopyranose residues (molar ratio, 2.54 : 1). The main chain of this galactomannan consists of 1,4- $\beta$ -D-mannopyranose residues, 39.2% of which are substituted at C6 with single residues of  $\alpha$ -D-galactopyranose. The probability of occurrence of mannobiose units differentially substituted with galactose was determined by  $^{13}\text{C}$ -NMR data and equaled, resp., 0.37, 0.47, and 0.16 for non-substituted Man-Man units, monosubstituted Gal(Man-Man) and (Man-Man)Gal units taken together, and for the disubstituted Gal(Man-Man)Gal units.

AN 2004:350616 HCAPLUS <<LOGINID:20101221>>

DN 141:170874

TI Composition and Structure of Galactomannan from the Seed of *Gleditsia ferox* Desf.

AU Egorov, A. V.; Mestechkina, N. M.; Shcherbukhin, V. D.

CS Bach Institute of Biochemistry, Russian Academy of Sciences, Moscow, 119071, Russia

SO Applied Biochemistry and Microbiology (Translation of *Prikladnaya Biokhimiya i Mikrobiologiya*) (2004), 40(3), 314-318  
CODEN: APEMAC; ISSN: 0003-6838

PB MAIK Nauka/Interperiodica Publishing

DT Journal  
LA English

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 9 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Thermally induced gelation of whey protein in the presence of a highly

soluble galactomannan sample

AB A sample of galactomannan from *Cassia javanica* seeds was obtained by extraction at 20°C, purified and characterized by capillary and steady shear viscometry techniques. The effect of the addition of this galactomannan sample (G20) on the aggregation and thermally induced gelation of a whey protein isolate (WPI) was investigated by dynamic shear expts. The results indicated a significant dependence of the aggregation and gelation properties of the mixed system on the galactomannan concentration

AN 2003:999507 HCAPLUS <<LOGINID:20101221>>

DN 140:302606

TI Thermally induced gelation of whey protein in the presence of a highly soluble galactomannan sample

AU Andrade, C. T.; Azero, E. G.; Ribeiro, A. V.; Torres, D. P.; Goncalves, M. P.

CS Instituto de Macromoleculas Professora Eloisa Mano, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 21945-970, Brazil

SO Natural Polymers and Composites IV, Proceedings from the International Symposium on Natural Polymers and Composites, 4th, Sao Pedro, Brazil, Sept. 1-4, 2002 (2002), 308-313. Editor(s): Capparelli Mattoso, Luiz Henrique; Leao, Alcides; Frollini, Elisabete. Publisher: Embrapa Instrumentacao Agropecuaria, Sao Carlos, Brazil. CODEN: 69ETIK; ISBN: 85-86463-10-8

DT Conference; (computer optical disk)

LA English

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 10 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Galactomannans

AB A review. The basic chemical, extraction process, mol. structure, and most importantly, functional properties and potential food applications of galactomannans, such as fenugreek gum and guar gum are discussed.

AN 2003:922361 HCAPLUS <<LOGINID:20101221>>

DN 140:269669

TI Galactomannans

AU Takahashi, Rheo; Naganawa, Shogo; Nishinari, Katsuyoshi

CS Laboratory of Food Technology, Osaka City University, Sumiyoshi-ku, Osaka, 558-8585, Japan

SO Foods & Food Ingredients Journal of Japan (2003), 208(10), 808-818

CODEN: FFIJER; ISSN: 0919-9772

PB FFI Janaru

DT Journal; General Review

LA Japanese

L27 ANSWER 11 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Water-Soluble Galactomannan from the Seeds of Ground Honeysuckle (*Lotus corniculatus* L.): Structure and Properties

AB Galactomannan, a water-soluble heteropolysaccharide, was isolated from the seed of a Far Eastern population of the ground honeysuckle *Lotus corniculatus* L. (yield, 1.65%). Anal. of this galactomannan showed that it consists of D-mannose and D-galactose residues (molar ratio, 1.22:1). Its aqueous solns. were characterized by a sp. rotation  $[\alpha]_D^{25} = +84.1^\circ$  and intrinsic viscosity  $[\eta] = 559 \text{ mL/g}$ . Anal. of this heteropolysaccharide using chemical and enzymic procedures, as well as IR and  $^{13}\text{C}$  NMR spectroscopy, showed that its main chain comprises 1,4- $\beta$ -D-mannopyranose residues, 95.5% of which are substituted at C-6 with single residues of  $\alpha$ -D-galactopyranose.

AN 2003:674687 HCAPLUS <<LOGINID:20101221>>

DN 140:89621

TI Water-Soluble Galactomannan from the Seeds of Ground Honeysuckle (*Lotus*

corniculatus L.): Structure and Properties  
 AU Egorov, A. V.; Mestechkina, N. M.; Plennik, R. Ya.; Shcherbukhin, V. D.  
 CS Bach Institute of Biochemistry, Russian Academy of Sciences, Moscow,  
 119071, Russia  
 SO Applied Biochemistry and Microbiology (Translation of Prikladnaya  
 Biokhimiya i Mikrobiologiya) (2003), 39(5), 509-511  
 CODEN: APBMAC; ISSN: 0003-6838  
 PB MAIK Nauka/Interperiodica Publishing  
 DT Journal  
 LA English  
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 12 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Cassia grandis Linn. f. seed galactomannan: structural and  
 crystallographical studies  
 AB Cassia grandis is a small or medium sized tree, found in abundance  
 throughout India. The seeds contain about 50% endosperm gum and possess  
 the characteristics of becoming a potential source of seed gum. The  
 purified polysaccharide has been characterized as a pure galactomannan  
 having a mannose-galactose ratio of 3.15; mol. weight (Mw) 80,200;  
 polydispersity (Mw/Mn), 1.35 and intrinsic viscosity  $[\eta]$ , 848 mL/g.  
 Methylation, periodate oxidation, Smith degradation and  $^{13}\text{C}$  NMR studies confirm  
 that the polysaccharide has the basic structure of legume galactomannans  
 consisting of a  $\beta$ -(1 $\rightarrow$ 4)-linked main mannan backbone to which  
 galactose units are attached at O-6. The orthorhombic lattice consts. of  
 the hydrated gum are as follows: a=9.00, b=24.81, c=10.30 Å. The  
 crystallog. data establish that the probable space group symmetry of the  
 unit cell is P2<sub>1</sub>2<sub>1</sub>2. The results are in contradiction to earlier reports  
 (Indian J. Chemical 16B (1978) 966; J. Indian Chemical Society 55 (1978) 1216)

in which a non-galactomannan polysaccharide structure has been assigned  
 having a main chain of (1 $\rightarrow$ 4)-linked galactose and mannose units in  
 the molar ratio 6:3, where 50% of the galactose units branched with two  
 galactose and one mannose through 1 $\rightarrow$ 3 linkage.

AN 2003:645062 HCAPLUS <<LOGINID:20101221>>  
 DN 139:323718  
 TI Cassia grandis Linn. f. seed galactomannan: structural and  
 crystallographical studies  
 AU Joshi, Harsha; Kapoor, Virendra P.  
 CS National Botanical Research Institute, Lucknow, 226 001, India  
 SO Carbohydrate Research (2003), 338(18), 1907-1912  
 CODEN: CRBRAT; ISSN: 0008-6215  
 PB Elsevier Ltd.  
 DT Journal  
 LA English  
 OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)  
 RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 13 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Structural characterization of a galactomannan from the cyanolichen  
 Leptogium azureum  
 AB A galactomannan was isolated from the cyanolichen Leptogium azureum via  
 successive alkaline extraction and precipitation with Fehling solution. The  
 structure of the  
 polysaccharide was investigated using NMR spectroscopy, methylation anal.,  
 Smith degradation, and HPSEC-MALLS. As galactomannans from other lichens  
 species, the polymer obtained presents a (1 $\rightarrow$ 6)-linked main chain of  
 $\alpha$ -mannopyranose, substituted preferentially at O-2 by  $\alpha$ -Manp  
 or  $\beta$ -Galp non-reducing ends. The C-1 region of the  $^{13}\text{C}$ -NMR of these

heteropolysaccharides are typical of some lichens species, and can be used as fingerprints in chemotaxonomy. However, in despite of the general structure in common, the substitution level of this structure and their content of mannose is higher than of the others galactomannans obtained of lichenized fungi contained the green alga of the genus *Trebouxia*.

AN 2003:580560 HCAPLUS <<LOGINID::20101221>>

DN 139:377638

TI Structural characterization of a galactomannan from the cyanolichen *Leptogium azureum*

AU Carbonero, E. R.; Tischer, C. A.; Cosentino, C.; Gorin, P. A. J.; Iacomini, M.

CS Departamento de Bioquímica, Universidade Federal do Paraná, Curitiba, CEP 81531-990, Brazil

SO Carbohydrate Polymers (2003), 53(4), 469-473

CODEN: CAPOD8; ISSN: 0144-8617

PB Elsevier Science B.V.

DT Journal

LA English

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 14 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Determination of the primary and fine structures of a galactomannan from the seed of *Gleditsia triacanthos* f. *inermis* L.

AB Galactomannan, a polysaccharide with a mol. weight of 660 kDa, was isolated for the first time from the seed of *Gleditsia triacanthos* f. *inermis* (yield, 15.4%). Its aqueous solns. were optically active ( $[\alpha]_D = +31.0^\circ$ ) and highly viscous ( $[\eta] = 578$  mL/g). Anal. of this heteropolysaccharide using chemical, enzymic, and chromatog. procedures, as well as IR and  $^{13}\text{C}$  NMR spectroscopy, showed that it consists of D-mannopyranose and D-galactopyranose residues (molar ratio, 2.42 : 1). The main chain of this galactomannan comprises 1,4- $\beta$ -D-mannopyranose residues, 41% of which are substituted at C6 with single residues of  $\alpha$ -D-galactopyranose. The probability of occurrence in the chain of mannanose units substituted otherwise, determined exptl., was 0.16 for the Man-Man unit, 0.50 for the Gal(Man-Man) and (Man-Man)Gal units, and 0.34 for the disubstituted Gal(Man-Man)Gal unit.

2003:518438 HCAPLUS <<LOGINID::20101221>>

DN 140:73954

TI Determination of the primary and fine structures of a galactomannan from the seed of *Gleditsia triacanthos* f. *inermis* L.

AU Egorov, A. V.; Mestechkina, N. M.; Shcherbukhin, V. D.

CS Bach Institute of Biochemistry, Russian Academy of Sciences, Moscow, 119071, Russia

SO Applied Biochemistry and Microbiology (Translation of *Prikladnaya Biokhimiya i Mikrobiologiya*) (2003), 39(4), 398-402

CODEN: APBMAC; ISSN: 0003-6838

PB MAIK Nauka/Interperiodica Publishing

DT Journal

LA English

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 15 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Extraction, purification and physicochemical characterization of fenugreek gum

AB Fenugreek gum was extracted from defatted, deactivated fenugreek seeds (produced in Canada) at 10 °C for 2 h to give a yield of 22% with only 2.36% protein contaminates. Further purification of fenugreek gum was

achieved by treating the gum solution with pronase to reduce the protein contaminants to 0.57%. High performance size exclusion chromatog. showed that the enzyme treatment did not affect the mol. weight of the galactomannans. Monosaccharide and methylation anal. suggested that the extracted fenugreek galactomannans were highly substituted and the ratios of galactose to mannose were from 1.00:1.02 to 1.00:1.14. Although fenugreek gum exhibited higher mol. weight compared to locust bean gum and guar gum, the intrinsic viscosity and rheol. behavior of fenugreek gum were reduced. This was attributed to the influence of the substitution patterns of the galactose on the mannosyl backbone chain. The purified fenugreek gum demonstrated less surface activity compared to the unpurified gum, which is in contradiction with the results reported in the literature. Detailed structural characterization of fenugreek gum has been done in order to elucidate the structure-functionality relationship of this gum and it will be reported in a subsequent paper.

AN 2003:358377 HCAPLUS <<LOGINID:20101221>>

DN 139:132585

TI Extraction, purification and physicochemical characterization of fenugreek gum

AU Brummer, Y.; Cui, W.; Wang, Q.

CS Department of Food Science, University of Guelph, Guelph, ON, Can.

SO Food Hydrocolloids (2003), 17(3), 229-236

CODEN: FOHYES; ISSN: 0268-005X

PB Elsevier Science Ltd.

DT Journal

LA English

OSC.G 35 THERE ARE 35 CAPLUS RECORDS THAT CITE THIS RECORD (35 CITINGS)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 16 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI The presence of partially 3-O-methylatedmethylated mannogalactan from the fruit bodies of edible basidiomycetes *Pleurotus ostreatus florida* Berk. and *Pleurotus ostreatoroseus* Sing

AB The partially 3-O-methylated mannogalactans were isolated from the fruiting bodies of edible basidiomycetes *Pleurotus ostreatus florida* Berk. and *Pleurotus ostreatoroseus* Sing. They were obtained via successive aqueous extraction, freeze thawing, and precipitation with Fehling solution and then investigated

using 13C- and 1H-NMR spectroscopy (including COSY, TOCSY and HMQC techniques), methylation anal. and Smith degradation. The main chain consisted of (1 6)-linked  $\alpha$ -D-galactopyranosyl residues containing 3-O-Me- $\alpha$ -D-galactopyranoses, a part of these units being substituted in the position O-2 with  $\beta$ -D-mannopyranose residues. The heteropolysaccharides found were similar with differences only in the levels of the 3-O-Me- $\alpha$ -D-galactopyranoses residues. The presence of partially 3-O-methylated mannogalactan appears to be typical of *Pleurotus* spp.

AN 2003:294891 HCAPLUS <<LOGINID:20101221>>

DN 139:146252

TI The presence of partially 3-O-methylatedmethylated mannogalactan from the fruit bodies of edible basidiomycetes *Pleurotus ostreatus florida* Berk. and *Pleurotus ostreatoroseus* Sing

AU Rosado, Fabio R.; Carbonero, Elaine R.; Claudino, Rafaela F.; Tischer, Cesar A.; Kemmelmeier, Carlos; Iacomini, Marcello  
CS Departamento de Bioquímica, Universidade Estadual de Maringá, Maringá, 87020-900, Brazil

SO FEMS Microbiology Letters (2003), 221(1), 119-124

CODEN: FMLED7; ISSN: 0378-1097

PB Elsevier Science B.V.

DT Journal

LA English  
 OSC.G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)  
 RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 17 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Co-administration of a polysaccharide with a chemotherapeutic agent for the treatment of cancer

AB Methods and compns. for treating cancer with a formulation are provided in which a polysaccharide, galactomannan, is co-administered with a therapeutic agent to a subject to reduce toxicity and/or enhance efficacy of the agent for the subject. Co-administration of galactomannan (120 mg/kg/dose) and 5-FU (75 mg/kg/dose) on a q4d+3 schedule brought a remarkable effect in NCr-nu athymic nude mice s.c. implanted with COLO 205 human colon tumors. It caused a significant delay in quadrupling of tumor weight, from 12.5 days for untreated animals (control) and 23.7 and 15.5 days for 5-FU alone and galactomannan alone, resp., to 56.0 days for their combination. Mean survival time shifted from 14.2 days (control, untreated animals) and 23.7 days (5-FU treatment) to 44.2 days for a combination treatment. Galactomannan was isolated and purified from seeds of *Gleditsia triacanthos*.

AN 2003:261019 HCAPLUS <<LOGINID:20101221>>

DN 138:281098

TI Co-administration of a polysaccharide with a chemotherapeutic agent for the treatment of cancer

IN Klyosov, Anatole; Platt, David

PA Pro-Pharmaceuticals, Inc., USA

SO U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 818,596.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20030064957	A1	20030403	US 2002-108237	20020327 <--
	US 7012068	B2	20060314		
	US 6645946	B1	20031111	US 2001-818596	20010327 <--
	US 20040038935	A1	20040226	US 2003-649130	20030827 <--
	US 6914055	B2	20050705		
	US 20040038916	A1	20040226	US 2003-649131	20030827 <--
	US 6982255	B2	20060103		
	WO 2005020900	A2	20050310	WO 2004-US27291	20040823 <--
	WO 2005020900	A3	20050915		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	WO 2005020901	A2	20050310	WO 2004-US27292	20040824 <--
	WO 2005020901	A3	20050526		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,				



TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

PRAI US 2001-818596 A2 20010327 <--  
 US 2001-317092P P 20010904 <--  
 US 2003-649130 A 20030827 <--  
 US 2003-649131 A 20030827 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 18 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Co-administration of a polysaccharide with a chemotherapeutic agent for the treatment of cancer

AB Methods and compns. for treating cancer with a formulation are provided in which a polysaccharide, galactomannan is coadministered with a chemotherapeutic agent to a subject to reduce toxicity and/or to enhance efficacy of the agent for the subject.

AN 2002:754226 HCAPLUS <<LOGINID:20101221>>

DN 137:257637

TI Co-administration of a polysaccharide with a chemotherapeutic agent for the treatment of cancer

IN Klyosov, Anatole; Platt, David

PA Pro-Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002076474	A1	20021003	WO 2002-US9524	20020327 <--
	W: JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	US 6645946	B1	20031111	US 2001-818596	20010327 <--
EP	1383516	A1	20040128	EP 2002-731178	20020327 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2004525143	T	20040819	JP 2002-574987	20020327 <--
	US 20040038935	A1	20040226	US 2003-649130	20030827 <--
	US 6914055	B2	20050705		
	US 20040038916	A1	20040226	US 2003-649131	20030827 <--
	US 6982255	B2	20060103		
	WO 2005020900	A2	20050310	WO 2004-US27291	20040823 <--
	WO 2005020900	A3	20050915		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	WO 2005020901	A2	20050310	WO 2004-US27292	20040824 <--

WO 2005020901 A3 20050526

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-818596 A 20010327 <--  
US 2001-317092P P 20010904 <--  
WO 2002-US9524 W 20020327 <--  
US 2003-649130 A 20030827 <--  
US 2003-649131 A 20030827 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)  
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 19 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Isolation of a Galactomannan That Enhances Macrophage Activation from the Edible Fungus *Morchella esculenta*

AB The edible mushroom *Morchella esculenta* is among the most highly prized and morphol. recognizable fungi in the world. The authors describe the isolation from a polar extract of *M. esculenta* carboxophores of a

high-mol.-weight

galactomannan, about 1.0 million Da, that exhibits immunostimulatory activity. At 3.0 µg/mL the galactomannan polysaccharide increased NF-κappa B directed luciferase expression in THP-1 human monocytic cells to levels 50% of those achieved by maximal activating concentration (10 µg/mL) of lipopolysaccharide. This galactomannan comprises about 2.0% of the dry fungal material weight, and its glycosyl components include mannose (62.9%) and galactose (20.0%).

AN 2002:630711 HCAPLUS <<LOGINID:20101221>>  
DN 137:309831

TI Isolation of a Galactomannan That Enhances Macrophage Activation from the Edible Fungus *Morchella esculenta*

AU Duncan, Christine J. G.; Pugh, Nirmal; Pasco, David S.; Ross, Samir A.

CS Department of Pharmacognosy and National Center for Natural Products Research, Research Institute of Pharmaceutical Sciences, School of Pharmacy, The University of Mississippi, MS, 38677, USA

SO Journal of Agricultural and Food Chemistry (2002), 50(20), 5683-5685

CODEN: JAFCAU; ISSN: 0021-8561

PB American Chemical Society

DT Journal

LA English

OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 20 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Evolution of fungal polysaccharides F1SS and proposal of their utilization as antigens for rapid detection of fungal contaminants

AB In comparison of the repeating units of polysaccharides F1SS reveals that they may have evolved from an ancestral α-D-(1→6)-mannan (structure 1). Partial or complete substitution of the mannose, mainly at O-2, by single residues of different sugars, originates a variety of

polysaccharides which may correspond to a first fungal radiation (order Onygenales). From these polysaccharides, only the mannan partially substituted by  $\beta$ -D-galactofuranose seems to be the origin of chains of  $\beta$ -D-galactofuranose with different lengths and linkage types, which may be considered a second radiation (order Eurotiales). The partial substitution of the O-2 of the galactofuranose residues of three different galactomannans (structures 14, 16 and 17) by glucuronic acid and other sugars or short chains may be the origin of a third radiation (order Hypocreales). The polysaccharides F155 evolution parallels certain evolutionary schemes and provides a variety of characters for the characterization and systematics of contaminant fungi in foods and animal or plant pathogens.

AN 2002:554079 HCAPLUS <<LOGINID:20101221>>  
 DN 138:103529  
 TI Evolution of fungal polysaccharides F155 and proposal of their utilization as antigens for rapid detection of fungal contaminants  
 AU Bernabe, M.; Ahrazem, O.; Prieto, A.; Leal, J. A.  
 CS Instituto de Química Orgánica, Departamento de Química Orgánica Biológicas, CSIC, Madrid, 28006, Spain  
 SO EJEAFChe, Electronic Journal of Environmental, Agricultural and Food Chemistry [online computer file] (2002), 1(1), No pp. given  
 CODEN: EEJEAT  
 URL: [http://EJEAFChe.uvigo.es/1\(1\)2002/004112002.pdf](http://EJEAFChe.uvigo.es/1(1)2002/004112002.pdf)  
 PB EJEAFChe  
 DT Journal; (online computer file)  
 LA English  
 OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)  
 RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 21 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Method for removal of color substances from galactomannan or its derivative gels  
 AB The gels useful as absorbents for agricultural application, disposable diaper, sanitary napkin, etc., are obtained by swelling galactomannan or its powdered derivs. in water, crosslinking with a crosslinker and drying where the color substances in the resulting gels can be removed by impregnating the gels in an organic solvent, then liquid-solid separation and drying. Thus, swelling 4 g PF 20 (guar gum with yellow index 21.5) in 200 mL pure water for 1 h with stirring, and mixing the resulting sol liquid (200 mL) with TEAT [Ti(IV) bis(triethanolaminatodisopropoxide)] (at 15 mmol Ti per kg-gum) and 0.5M Na tetraborate·10H<sub>2</sub>O (to 500 mmol B) gave a gel which was broken by knife blades in a blender containing i-PrOH having moisture content 0%, combined with TEAT to a Ti content of 85 mmol, after 10 min, filtered, washed with i-PrOH and dried to give a gel with yellow index 33.0 vs. 47.8 for a gel prepared similarly by using water in place of i-PrOH.

AN 2002:347385 HCAPLUS <<LOGINID:20101221>>  
 DN 136:342487  
 TI Method for removal of color substances from galactomannan or its derivative gels  
 IN Kawanaka, Satoshi; Nakai, Miho; Naito, Nobuhiro; Wada, Satoko  
 PA Unitika Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002128801	A	20020509	JP 2000-324072	20001024 <--

L27 ANSWER 22 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Investigating plant galactomannans

AB The authors review on the biol. importance and occurrence of galactomannan in plants. Its chemical composition and structure are examined, and a short laboratory

practical exercise on the isolation and determination of D-mannose/D-galactose ratio of plant galactomannan is presented.

AN 2002:321818 HCAPLUS <<LOGINID::20101221>>

DN 137:294430

TI Investigating plant galactomannans

AU Mulimani, Veerappa H.; Prashanth, Sirigeri J.

CS Department of Biochemistry, Gulbarga University, Karnataka, 585 106, India

SO Biochemistry and Molecular Biology Education (2002), 30(2),

101-103

CODEN: BMBECE; ISSN: 1470-8175

PB American Society for Biochemistry and Molecular Biology, Inc.

DT Journal

LA English

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 23 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Galactomannan from ambiguous crazyweed (*Oxytropis ambigua* (Pall.) DC)

AB A galactomannan with a mol. weight of 735 kDa was first isolated and purified from seeds of ambiguous crazyweed *Oxytropis ambigua* (Pall) DC (family Leguminosae) with a yield of 3.6%. Its aqueous solns. displayed an optical activity ( $[\alpha]_D = 73.32^\circ$ ) and high viscosity ( $[\eta] = 644$  mL/g). Chemical anal. and  $^{13}\text{C}$ -NMR spectroscopy revealed the presence of D-mannopyranose and D-glucopyranose in the heteropolysaccharide at a molar ratio of 1.39: 1. The linear backbone of its macromol. consists of 1,4- $\beta$ -D-mannopyranose residues. Single  $\alpha$ -D-galactose residues substitute 72% of the mannoses to form branches.

AN 2001:597062 HCAPLUS <<LOGINID::20101221>>

DN 135:315907

TI Galactomannan from ambiguous crazyweed (*Oxytropis ambigua* (Pall.) DC)

AU Mestechkina, N. M.; Lobanova, I. E.; Anulov, O. V.; Shcherbukhin, V. D.

CS Bach Institute of Biochemistry, Russian Academy of Sciences, Moscow, 117071, Russia

SO Applied Biochemistry and Microbiology (Translation of Prikladnaya

Biokhimiya i Mikrobiologiya) (2001), 37(4), 388-391

CODEN: APBMAC; ISSN: 0003-6838

PB MAIK Nauka/Interperiodica

DT Journal

LA English

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 24 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Further studies on modified galactomannans with enhanced biological activities

AB Four galactomannans were isolated from the whole seeds of *Leucaena* sp., *Medicago sativa*, and *Phoenix dactylifera* and the seed hulls of *Glycine max*. The native products exhibited considerable anticoagulation and fibrinolytic activities. As an attempt to improve these activities the native galactomannans were modified by periodate oxidation followed by reduction

of the formed polyaldehyde. Sulfation of the galactomannan polyalcs. led to a considerable improvement in the fibrinolytic activities of 2 of the

modified polysaccharides.

AN 2001:226941 HCAPLUS <<LOGINID::20101221>>

DN 135:185284

TI Further studies on modified galactomannans with enhanced biological activities

AU Magdel - Din Hussein, M.; Helmy, Wafaa A.

CS Department of Natural Products, National Research Centre, Cairo, Egypt

SO Bulletin of the National Research Centre (Egypt) (2000), 25(4),

411-422

CODEN: BNRCT; ISSN: 1110-0591

PB National Information and Documentation Centre

DT Journal

LA English

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 25 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Galactomannans as a sieving matrix in capillary electrophoresis

AB Purification of galactomannans including guaran, tara gum, and locust bean gum is described as well as their use as a sieving matrix in DNA sequencing by capillary electrophoresis (CE). Three methods of galactomannan purification were developed and tested using guaran. The first method is based on hydrolysis of proteins using alkali treatment and precipitation of guaran with acetone. The second method uses ion-exchange resins QAE Sephadex A-25 and SP Sephadex C-25 together with acetone precipitation. The third method is

similar

to the second one, except that it uses ion-exchange resins based on polystyrene, Source 30Q and Source 30S. Capillary zone electrophoresis of acetonitrile exts. from guaran revealed 4-5 characteristic major peaks and several minor peaks. Guar gum from different suppliers differed in the content of proteins. In purified guaran, protein peaks were detectable only using a 300-fold concentrate of extract. The content of proteins in the

guaran

purified using the third method was 0.001% m/m as determined by CE. The weight average mol. mass of purified guaran can be as large as  $2.2 \times 10^6$ . The purified galactomannans were used as a sieving matrix in DNA sequencing by CE. M13 DNA was sequenced to read lengths of about 600 bases in less than 90 min. Separation efficiencies exceeded 1 million theor. plates for DNA fragments shorter than about 600 bases.

AN 2001:184129 HCAPLUS <<LOGINID::20101221>>

DN 134:305901

TI Galactomannans as a sieving matrix in capillary electrophoresis

AU Dolnik, Vladislav; Gurske, William A.; Padua, Allan

CS Molecular Dynamics, Sunnyvale, CA, 94085, USA

SO Electrophoresis (2001), 22(4), 707-719

CODEN: ELCTDN; ISSN: 0173-0835

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 26 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Two-dimensional NMR spectroscopic studies of fenugreek (Trigonella foenum-graecum L.) galactomannan without chemical fragmentation

AB Fenugreek galactomannan, as compared to other gums particularly of guar and locust bean, is less exploited in the food industry. With regard to the structure of fenugreek galactomannan, though reports on galactose substitutional pattern are available, supporting data by NMR correlation studies are scanty. The present study deals with the observations made by

2-dimensional NMR spectroscopy of fenugreek galactomannan. Sequential extraction of fenugreek flour with cold H<sub>2</sub>O, hot H<sub>2</sub>O and alkali resulted in different fractions. Purification of alkali extracted polysaccharide B by Cu complex precipitation and GPC (TSK gel) fetched two fractions, viz. Fra.1 and Fra.2 with a gal:man ratio of 1:1.04 and 1:1.12, resp. *Aspergillus niger*  $\beta$ -D-mannanase had no effect on the hydrolysis of Fra.1 and Fra.2. indicating high substitution and interference by galactose stubs. All the assignments of <sup>1</sup>H- and <sup>13</sup>C- signals could be achieved and verified through various <sup>1</sup>H-<sup>1</sup>H and <sup>1</sup>H-<sup>13</sup>C correlation expts., viz. DQF-COSY, TOCSY and HSQC. HMBC expts. resulted in correlations of H-1(gal)/C-6(man), H-4(man)/C-1(man) and H-6(man)/C-1(gal). The assignment of anomeric protons and confirmation of (1  $\rightarrow$  4) linked mannan back bone with (1  $\rightarrow$  6) attachment of gal clarified the structure [4]  $\alpha$ -gal-(1  $\rightarrow$  6)]- $\beta$ -man-(1  $\rightarrow$  3)n.

AN 2001:175932 HCAPLUS <<LOGINID::20101221>>  
 DN 134:340248  
 TI Two-dimensional NMR spectroscopic studies of fenugreek (*Trigonella foenum-graecum* L.) galactomannan without chemical fragmentation  
 AU Ramesh, H. P.; Yamaki, K.; Ono, H.; Tsushida, T.  
 CS National Food Research Institute, Tsukuba Science City, 305-8642, Japan  
 SO Carbohydrate Polymers (2001), 45(1), 69-77  
 CODEN: CAPOD8; ISSN: 0144-8617  
 PB Elsevier Science Ireland Ltd.  
 DT Journal  
 LA English  
 OSC.G 19 THERE ARE 19 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)  
 RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 27 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Molecular organization of the alkali-insoluble fraction of *Aspergillus fumigatus* cell wall. [Erratum to document cited in CA134:14984]  
 AB On pages 27603 and 27604, the mass spectra of Figures 9 and 11 are inverted. Figure 9 is described by the Figure 11 legend and Figure 11 by the Figure 9 legend. These figures with their correct legends are given.  
 AN 2001:34639 HCAPLUS <<LOGINID::20101221>>  
 DN 137:59956  
 TI Molecular organization of the alkali-insoluble fraction of *Aspergillus fumigatus* cell wall. [Erratum to document cited in CA134:14984]  
 AU Fontaine, Thierry; Simenel, Catherine; Dubreucq, Guy; Adam, Olivier; Delepierre, Muriel; Lemoine, Jerome; Vorgias, Constantin E.; Diaquin, Michel; Latge, Jean-Paul  
 CS Laboratoire des *Aspergillus*, Institut Pasteur, Paris, 75724, Fr.  
 SO Journal of Biological Chemistry (2000), 275(52), 41528-41529  
 CODEN: JBCHA3; ISSN: 0021-9258  
 PB American Society for Biochemistry and Molecular Biology  
 DT Journal  
 LA English  
 OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L27 ANSWER 28 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI On the galactosyl distribution of commercial galactomannans  
 AB A simple method was developed that enabled the enzymic determination of the galactose distribution in galactomannans. Endo-Mannanase of *Aspergillus niger* was used to degrade the galactomannan polymers and the degradation products were determined with high-performance anion-exchange chromatog. A whole range of com. high-to-low substituted galactomannans was analyzed in this way. It was found that differences in the anion-exchange chromatograms reflected dissimilarities in the distribution of galactose and could be used directly to discern these dissimilarities. The differences among the various elution profiles were used to construct a

similarity distance tree. In addition to this approach, the absolute amount of non-substituted mannose released by the enzyme was found to be a good discriminating factor. In this way, galactomannans with regular, blockwise, and randomly distributed galactose could be discerned. All gums and the highly substituted gum of *Prosopis juliflora* were found to have a blockwise distribution of galactose. For different batches of tara gum both random and blockwise distributions were found. Among batches of locust bean gum the greatest variation was observed: both random, blockwise, and ordered galactose distributions were present. Cassia gum was found to have a highly regular distribution of galactose.

AN 2000:834468 HCAPLUS <<LOGINID:20101221>>

DN 134:147771

TI On the galactosyl distribution of commercial galactomannans

AU Daas, P. J. H.; Schols, H. A.; de Jongh, H. H. J.

CS Wageningen Centre for Food Sciences, Wageningen, NL-6703 GW, Neth.

SO Carbohydrate Research (2000), 329(3), 609-619

CODEN: CRBRAT; ISSN: 0008-6215

PB Elsevier Science Ltd.

DT Journal

LA English

OSC.G 47 THERE ARE 47 CAPLUS RECORDS THAT CITE THIS RECORD (47 CITINGS)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 29 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Studies on nonconventional galactomannans and their mixtures with  $\kappa$ -carrageenan

AB Galactomannans were obtained from *Cassia javanica* L., *Caesalpinia pulcherrima* and *Prosopis juliflora* seeds. The functional properties, as well as their structural features were investigated. Rheol. and mech. behaviors of their aqueous mixts. with  $\kappa$ -carrageenan from *Hypnea musciformis* were evaluated in order to verify their potential usefulness.

AN 2000:810244 HCAPLUS <<LOGINID:20101221>>

DN 134:101101

TI Studies on nonconventional galactomannans and their mixtures with  $\kappa$ -carrageenan

AU Andrade, Cristina T.; Azero, Edwin G.

CS Instituto de Macromoleculas Professora Eloisa Mano, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 21945-970, Brazil

SO Natural Polymers and Composites, [Proceedings from the Third International Symposium on Natural Polymers and Composites, [and the] Workshop on Progress in Production and Processing of Cellulosic Fibres and Natural Polymers], Sao Pedro, Brazil, May 14-17, 2000 (2000), 108-113.

Editor(s): Capparelli Mattoso, Luiz Henrique; Leao, Alcides; Frollini, Elisabete. Publisher: Embrapa Instrumentacao Agropecuaria, Sao Carlos, Brazil.

CODEN: 69AHKY

DT Conference

LA English

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 30 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI New improved techniques to eliminate pollutants from dye house effluents

AB Nanofiltration treatment of textile industry wastewater with the aim of recycling water and textile additives and biodegradn. of problem pollutants is discussed. Test results are presented for size reclamation of starch and galactomannan. In combination with reverse osmosis, salt-free permeates can be produced. Nanofiltration concs. can be reused, with the help of colorimetric systems, in the dyeing process or disposed of in a combined anaerobic/aerobic biol. treatment process. For azoic dyes not

degradable by aerobic treatment alone, an almost complete decolorization can be achieved. With an added aerobic treatment following anaerobic step, more organic pollutants can be nearly completely degraded. Treatment of highly polluted textile wastewater almost completely reduces color, COD, BOD<sub>5</sub>, adsorbable organic halides, and sludge.

AN 2000:801447 HCAPLUS <<LOGINID:20101221>>  
DN 134:32522

TI New improved techniques to eliminate pollutants from dye house effluents  
AU Stegmaier, T.; Janitzka, J.; Schafer, T.; Trauter, J.; Planck, H.  
CS Institute of Textile Technology and Process Engineering, Denkendorf, Germany

SO Water and Textiles, International Conference, Huddersfield, United Kingdom, May 12-14, 1999 (1999), Meeting Date 1999, 311-329  
Publisher: University of Huddersfield, Huddersfield, UK.  
CODEN: 69AOWX

DT Conference  
LA English

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 31 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Composition and structure of a galactomannan from seeds of Astragalus lehmannianus Bunge

AB Purified Astragalus lehmannianus galactomannan (yield, 4.8%) contained 55% D-mannose and 45% D-galactose and had a mol. weight of 997.03 kDa. Its aqueous solns. were optically active and highly viscous (sp. rotation,  $[\alpha]_D$ , equaled +81.3°; viscosity,  $[\eta]$ , 868.4 mL/g). Chemical, chromatog., and spectral (IR and <sup>13</sup>C-NMR spectroscopy) methods were used to demonstrate that the main chain of the mol. is formed by residues of 1,4-β-D-mannopyranose, 78% of which are substituted at position 6 with single α-D-galactopyranose. The distribution of galactose along the chain was calculated from NMR spectra: frequencies of occurrence, per pair of neighboring mannose units, of (1) two substituents, (2) one substituent, and (3) no substituents were 65.3, 31.5, and 3.2%, resp. The sp. rotation of galactomannans was shown to correlate with their content of galactose.

AN 2000:754766 HCAPLUS <<LOGINID:20101221>>  
DN 134:27549

TI Composition and structure of a galactomannan from seeds of Astragalus lehmannianus Bunge

AU Mestechkina, N. M.; Anulov, O. V.; Smirnova, N. I.; Shcherbukhin, V. D.  
CS Bach Institute of Biochemistry, Russian Academy of Sciences, Moscow, 117071, Russia

SO Prikladnaya Biokhimiya i Mikrobiologiya (2000), 36(5), 582-587  
CODEN: PBMIAM; ISSN: 0555-1099

PB MAIK Nauka  
DT Journal  
LA Russian

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L27 ANSWER 32 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Molecular organization of the alkali-insoluble fraction of Aspergillus fumigatus cell wall

AB Phys. and biol. properties of the fungal cell wall are determined by the composition

and arrangement of the structural polysaccharides. Cell wall polymers of fungi are classically divided into two groups depending on their solubility in hot alkali. We have analyzed the alkali-insol. fraction of the Aspergillus fumigatus cell wall, which is the fraction believed to be responsible for fungal cell wall rigidity. Using enzymic digestions with recombinant endo-β-1,3-glucanase and chitinase, fractionation by gel



filtration, affinity chromatog. with immobilized lectins, and high performance liquid chromatog., several fractions that contained specific inter-polysaccharide covalent linkages were isolated. Unique features of the *A. fumigatus* cell wall are (i) the absence of  $\beta$ -1,6-glucan and (ii) the presence of a linear  $\beta$ -1,3/1,4-glucan, never previously described in fungi. Galactomannan, chitin, and  $\beta$ -1,3-glucan were also found in the alkali-insol. fraction. The  $\beta$ -1,3-glucan is a branched polymer with 4% of  $\beta$ -1,6 branch points. Chitin, galactomannan, and the linear  $\beta$ -1,3/1,4-glucan were covalently linked to the non-reducing end of  $\beta$ -1,3-glucan side chains. As in *Saccharomyces cerevisiae*, chitin was linked via a  $\beta$ -1,4 linkage to  $\beta$ -1,3-glucan. The data obtained suggested that the branching of  $\beta$ -1,3-glucan is an early event in the construction of the cell wall, resulting in an increase of potential acceptor sites for chitin, galactomannan, and the linear  $\beta$ -1,3/1,4-glucan.

AN 2000:646677 HCAPLUS <<LOGINID:20101221>>  
 DN 134:14984  
 TI Molecular organization of the alkali-insoluble fraction of *Aspergillus fumigatus* cell wall  
 AU Fontaine, Thierry; Simenel, Catherine; Dubreucq, Guy; Adam, Olivier; Delépierre, Muriel; Lemoine, Jerome; Vorgias, Constantin E.; Diaquin, Michel; Latge, Jean-Paul  
 CS Laboratoire des *Aspergillus*, Institut Pasteur, Paris, 75724, Fr.  
 SO Journal of Biological Chemistry (2000), 275(36), 27594-27607  
 CODEN: JBCHA3; ISSN: 0021-9258  
 PB American Society for Biochemistry and Molecular Biology  
 DT Journal  
 LA English  
 OSC.G 96 THERE ARE 96 CAPLUS RECORDS THAT CITE THIS RECORD (96 CITINGS)  
 RE.CNT 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 33 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Studies on chemical constituents of the seeds of *Borassus flabellifer* Linn. part-1 chemical investigations on water extract of the seeds  
 AB Water extraction of pretreated matured seeds of *Borassus flabellifer* Linn. afforded a homogeneous polysaccharide. Sugar anal. of the polysaccharide showed mainly D-mannose and D-galactose. The polysaccharide was completely methylated and acetylated. The resulting alditol acetates were analyzed by GLC. These showed the presence of 4 Manp1; 4 Man6p1 and Galp1 units in the fully methylated product. In the light of the chemical investigations the polysaccharide may be regarded as a galactomannan with mannose as the repeating units.  
 AN 2000:640625 HCAPLUS <<LOGINID:20101221>>  
 DN 134:83461  
 TI Studies on chemical constituents of the seeds of *Borassus flabellifer* Linn. part-1 chemical investigations on water extract of the seeds  
 AU Awal, Abdul  
 CS Carbohydrate section, BCSIR Laboratories, Dhaka, 1205, Bangladesh  
 SO Bangladesh Journal of Scientific and Industrial Research (1998), 33(1), 86-93  
 CODEN: BJSIBL; ISSN: 0304-9809  
 PB Bangladesh Council of Scientific and Industrial Research  
 DT Journal  
 LA English  
 RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 34 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Tannins in method of isolating mucilaginous polysaccharides and uses for the polysaccharides thus obtained

AB The present invention provides a method of isolating mucilaginous polysaccharides from plants, cereals, cell cultures, or fungi such as mushrooms known to have mucilaginous or protein-bound polysaccharides with desirable biol. properties. The mucilaginous polysaccharides present in aqueous solution or tissue exts. are treated with tannins to form a complex which

is then separated from the solution. The complex is then treated one or more times with either solvents or other substances in solution to remove the bound tannins from the complex thereby and releasing the isolated polysaccharide. The polysaccharides prepared according to the present method retain properties that are substantially similar to those of the native polysaccharide as it is found in the resp. plant or cell. The polysaccharides thus prepared are used in a variety of products, e.g., in cosmetics, pharmaceuticals, and food products. This process is particularly suitable for isolating acetylated mannose polymers from aloe plants and beta glucans.

AN 2000:493312 HCAPLUS <<LOGINID:20101221>>

DN 133:101738

TI Tannins in method of isolating mucilaginous polysaccharides and uses for the polysaccharides thus obtained

IN Vittori, Natale

PA Vito-Mannan Polysaccharide L.L.C., USA

SO PCT Int. Appl., 45 pp.

CODEN: P1XXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000041541	A2	20000720	WO 2000-US759	20000111 <--
	WO 2000041541	A3	20011115		
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	CA 2328092	A1	20000720	CA 2000-2328092	20000111 <--
	EP 1144456	A2	20011017	EP 2000-904309	20000111 <--
	EP 1144456	A3	20020911		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	US 6482942	B1	20021119	US 2000-481111	20000111 <--
	MX 2000009966	A	20011211	MX 2000-9966	20001011 <--
PRAI	US 1999-115619P	P	19990112	<--	
	WO 2000-US759	W	20000111	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 35 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Galactomannan from Gleditsia texana seeds

AB Galactomannan from G. texana seeds was analyzed and found to differ from that from Gleditsia sp. previously reported in the ratio of monomers, d.p., mol. mass, and the degree of substitution in the  $\beta$ -D-mannan main chain by D-galactose units.

AN 2000:404920 HCAPLUS <<LOGINID:20101221>>

DN 133:132472

TI Galactomannan from *Gleditsia texana* seeds  
AU Mirzaeva, M. R.; Rakhmanberdyeva, R. K.; Rakhimov, D. A.  
CS Oshsk State University, Kyrgyzstan  
SO Chemistry of Natural Compounds (Translation of Khimiya Prirodnykh  
Soedinenii) (2000), Volume Date 1999, 35(5), 580-581  
CODEN: CHNCA8; ISSN: 0009-3130  
PB Consultants Bureau  
DT Journal  
LA English  
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 36 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Galactomannans from two species of *Gleditsia* studied by <sup>13</sup>C NMR  
AB Galactomannans isolated from the seeds of *Gleditsia macracantha* (GMM) and  
*Gleditsia texana* (GMT) have mol. masses (MM) of 750,000 and 795,000 and  
galactose to mannose ratios of 1.0:4.9 and 1.0:3.8, resp. GMT and GMM are  
depolymerized to fragments of MM 25 and 19 kDa with retention of the primary  
structure and are studied by <sup>13</sup>C NMR spectroscopy. The principal chains  
of GMM and GMT are  $\beta$ -1-4-mannopyranose residues in which the hydroxyl  
groups of C-6 are substituted by single  $\alpha$ -D-galactopyranose units.  
AN 2000:404897 HCAPLUS <<LOGINID:20101221>>  
DN 133:177379  
TI Galactomannans from two species of *Gleditsia* studied by <sup>13</sup>C NMR  
AU Rakhmanberdyeva, R. K.; Mirzaeva, M. R.; Rakhimov, D. A.; Abdullaev, N. D.  
CS Institute of Plant Chemistry of the Academy of Sciences of the Uzbek  
Republic, Tashkent, Uzbekistan  
SO Chemistry of Natural Compounds (Translation of Khimiya Prirodnykh  
Soedinenii) (2000), Volume Date 1999, 35(5), 498-501  
CODEN: CHNCA8; ISSN: 0009-3130  
PB Consultants Bureau  
DT Journal  
LA English  
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 37 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI An unusual juxtaposition of polysaccharide components of *Collema*  
*leptosporum*  
AB The lichenized ascomycete, *Collema leptosporum* Malme, was extracted with  
aqueous  
methanol to give traces of mannitol and  
3-O- $\beta$ -D-glucopyranosyl-D-mannitol (2.7% yield). The residue was  
consecutively extracted with hot water to give a complex uronic acid-containing  
polysaccharide, and then with hot aqueous alkali which provided a mixture of  
polysaccharides. This was fractionated with Cetavlon to give a branched  
galactomannan, which had the lowest content of galactose yet reported for  
such a lichen polysaccharide. It has a main chain of (1 $\rightarrow$ 6)-linked  
 $\alpha$ -Manp units partly substituted at O-2,4 by non-reducing end-units  
of Manp and Galp, shown by NMR spectroscopy to have  $\alpha$ - and  
 $\beta$ -configurations, resp. The other polysaccharide component was  
unexpectedly a branched (1 $\rightarrow$ 3), (1 $\rightarrow$ 6)-linked  $\beta$ -glucan,  
which is typical of a basidiomycete, whereas those of ascomycetes contain  
similar linkages but in linear glucans.  
AN 1999:714453 HCAPLUS <<LOGINID:20101221>>  
DN 132:47312  
TI An unusual juxtaposition of polysaccharide components of *Collema*  
*leptosporum*  
AU Prado, S. R. T.; Gorin, P. A. J.; Stuelp, P. M.; Honda, N. K.; Iacomini,  
M.  
CS Depto de Bioquímica, Universidade Federal do Parana, Curitiba-PR,

81531-990, Brazil  
 SO Carbohydrate Polymers (1999), 40(4), 271-276  
 CODEN: CAPOD8; ISSN: 0144-8617  
 PB Elsevier Science Ireland Ltd.  
 DT Journal  
 LA English  
 OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)  
 RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 38 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Solution properties of the galactomannans extracted from the seeds of  
 Caesalpinia pulcherrima and Cassia javanica: comparison with locust bean  
 gum  
 AB The galactomannans from the seeds of Caesalpinia pulcherrima and Cassia  
 javanica were extracted from the milled seeds in water at room temperature  
 Both products, as well as a com. sample of locust bean gum (LBG), were purified  
 by precipitation in iso-Pr alc. The intrinsic viscosity determined for LBG,  
 $[\eta] = 15.2 \text{ dL/g}$ , was slightly higher than those for the other two  
 galactomannans. The dependence of the specific viscosity at zero shear  
 rate on the coil overlap parameter,  $C[\eta]$ , revealed a similar behavior  
 for the three galactomannans. A master curve was obtained with a critical  
 concentration,  $C^*$ , at  $C^*[\eta]=3.3$ . The slope of the curve in the concentrated  
 regime is higher than the values in the range of 3.9-6.6, obtained for the  
 generalized behavior of several random coil polysaccharides. Dynamic  
 expts. showed that, at the concns. studied, the behavior of the  
 galactomannans was typical of systems with predominant entanglement  
 networks in the region between the terminal and plateau zones of frequency  
 response. The correlation between dynamic and steady shear properties  
 (Cox-Merz rule) was satisfactory for the three galactomannans.

AN 1999:701608 HCAPLUS <<LOGINID:20101221>>  
 DN 131:350480  
 TI Solution properties of the galactomannans extracted from the seeds of  
 Caesalpinia pulcherrima and Cassia javanica: comparison with locust bean  
 gum  
 AU Andrade, C. T.; Azero, E. G.; Luciano, L.; Goncalves, M. P.  
 CS Instituto de Macromoleculas Professora Eloisa Mano, Universidade Federal  
 do Rio de Janeiro, Rio de Janeiro, 21945-970, Brazil  
 SO International Journal of Biological Macromolecules (1999),  
 26(2,3), 181-185  
 CODEN: IJBMDF; ISSN: 0141-8130  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 OSC.G 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)  
 RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 39 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Rheological studies of some potential seed galactomannans  
 AB Solution properties of eight water soluble galactomannans isolated from the  
 leguminous seeds of Cassia siamea Lamk, C. alata Linn., Crotalaria juncea  
 Linn., C. saltiana Andr., Caesalpinia coriaria Willd., C. saltiana  
 Brangeg, Indigofera hirsuta Linn. and I. tinctoria Linn, have been carried  
 out under different conditions. Out of these, Caesalpinia species are  
 trees and rest belonging to the shrub/herb categories. The seeds have  
 been found to contain varied amts. of endosperm gums ranging from 13 to  
 34%. For 1% solns. (weight/volume), Cassia alata afforded 2000 cP viscosity

followed by Indigofera tinctoria (1000 cP) and other gum samples had viscosities in range of 300-800 cP. The increase in concentration of the gum solns. from 1 to 3% resulted into the uplift of viscosity from 2 to 10 times. All the gum solns. showed the characteristics of loosing viscosities on keeping. The samples lost 14 to 33% of original viscosity after 5 h. and 51 to 74% after 10 h. Since these gums are non-ionic, they showed stability over wide range of pH and maximum viscosity at pH 7. Generally they show little variation in their viscosities on acidification/alkylation. The different gum samples provide medium or low range of viscosities and these could be utilized as suspending, dispersing and water holding agents in pharmaceutical and food industries.

AN 1999:647521 HCAPLUS <<LOGINID:20101221>>

DN 132:61634

TI Rheological studies of some potential seed galactomannans

AU Khan, Gohar; Kapoor, V. P.

CS Phytochemistry Department, National Botanical Research Institute, Lucknow, 226 001, India

SO Trends in Carbohydrate Chemistry (1999), 4, 99-107

CODEN: TCHCFX

PB Surya International Publications

DT Journal

LA English

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 40 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Physico-chemical and viscosity studies of Cassia grandis seed galactomannan

AB Cassia grandis Linn. f., commonly known as Brazilian Cassia, Coral or Pink Shower is a small or medium sized tree and grown for ornamental in gardens and avenues for shade. The leguminous seeds are comparatively big in size (100-seed weight 4.2-4.7 g) and contain about 50% endosperm. The anal. of seeds is as follows: moisture 8-10%, crude protein 9-12%, pentosan 8-10% and water soluble gum 32-38%. The galactomannan was isolated from the

separated

endosperms by fractional precipitation of 3-4% aqueous solution with ethanol.

The

purified polysaccharide was white amorphous powder having intrinsic viscosity of 843 mL/g for 1 g/L solution at 25°C with Huggies constant (K1)=0.3125. The average mol. wts., as determined by steric exclusion

chromatog.,

were weight average 8.02 + 105, number average 8.95 + 105 and Z-average 3.76 + 106. The polydispersity of the gum was 1.35. The constituent sugar anal. was determined by HPLC and GLC of the corresponding alditol acetate derivs. and ratio of mannose/galactose was 3.20. The viscosity behavior of the seed gum has been undertaken at different conditions and results indicate that it possesses non-ionic properties comparable to other com. gums and could be utilized for industrial purposes.

AN 1999:647520 HCAPLUS <<LOGINID:20101221>>

DN 132:76043

TI Physico-chemical and viscosity studies of Cassia grandis seed galactomannan

AU Kapoor, V. P.; Khan, Gohar

CS Phytochemistry Department, National Botanical Research Institute, Lucknow, 226 001, India

SO Trends in Carbohydrate Chemistry (1999), 4, 91-98

CODEN: TCHCFX

PB Surya International Publications

DT Journal

LA English

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

## ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 41 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Extraction and characterization of galactomannan from the seeds of  
 Caesalpinia pulcherrima  
 AB The galactomannan from the seeds of Caesalpinia pulcherrima was extracted in  
 water and obtained in 25% yield, after purification. The galactomannan obtained  
 has D-mannose to D-galactose ratio M/G = 3.1, intrinsic viscosity,  $[\eta]$   
 = 11.2 dl/g (in water at 298 K), and viscosity-average mol. weight,  $MV = 1.7$   
 + 106. The dependence of specific viscosity at zero shear rate,  
 $\eta_{sp}/c$ , on the coil overlap parameter,  $C[\eta]$ , showed slopes of 1.1  
 and 4.2 for the dilute and concentrated regimes, resp. The Cox-Merz rule was  
 followed satisfactorily by solns. submitted to steady and dynamic flows.  
 AN 1999:585365 HCAPLUS <<LOGINID:20101221>>  
 DN 131:338531  
 TI Extraction and characterization of galactomannan from the seeds of  
 Caesalpinia pulcherrima  
 AU Azero, Edwin G.; Andrade, Cristina T.  
 CS Inst. Macromol., Univ. Fed. Rio de Janeiro, Rio de Janeiro, 21945-970,  
 Brazil  
 SO Polimeros: Ciencia e Tecnologia (1999), 9(2), 54-59  
 CODEN: PCTEFL; ISSN: 0104-1428  
 PB Associacao Brasileira de Polimeros  
 DT Journal  
 LA Portuguese  
 OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
 RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 42 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Antibacterial activity of lysozyme-galactomannan conjugate against  
 Escherichia coli  
 AB Lysozyme was covalently conjugated with galactomannan through a  
 amino-carbonyl reaction between the lysine  $\epsilon$ -amino groups of  
 lysozyme and the reducing ends of galactomannan at a relative humidity of  
 79% and 60°C. The resulting lysozyme-galactomannan conjugate (LGC)  
 was investigated for its antibacterial activity against Escherichia coli.  
 Lysozyme alone did not exhibit antibacterial activity against E. coli. In  
 contrast, significant bactericidal effect was observed for LGC, depending on  
 the reaction temperature. The degree of conjugation between lysozyme and  
 galactomannan was dependent on the incubation time, which affected the  
 antibacterial efficiency against E. coli. This study demonstrated that  
 the amino-carbonyl reaction between lysozyme and galactomannan could be a  
 potential tool to modify lysozyme toward broadening its antibacterial  
 spectrum to Gram-neg. bacteria.  
 AN 1999:218722 HCAPLUS <<LOGINID:20101221>>  
 DN 131:56331  
 TI Antibacterial activity of lysozyme-galactomannan conjugate against  
 Escherichia coli  
 AU Hwang, Jae-Kwan; Kim, Hyun-Jin; Choi, MoonJung; Shin, Hae-Hun; Pyun,  
 Yu-Ryang  
 CS Bioproducts Research Center, Yonsei University, Seoul, 120-749, S. Korea  
 SO Journal of Food Science and Nutrition (1998), 3(4), 320-323  
 CODEN: JFSNFW; ISSN: 1226-332X  
 PB Korean Society of Food Science and Nutrition  
 DT Journal  
 LA English  
 OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
 RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 43 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Galactomannans and arabinans from seeds of Caesalpiniaceae  
AB Schizolobium parahybae and S. amazonicum seeds yielded galactomannans with identical 3.0:1 Man:Gal ratios and with the same D-galactose distribution along the main chain. Although the galactomannan from seeds of *Cassia fastuosa* showed the same Man:Gal ratio, its fine structure differed significantly from that of the two *Schizolobium* species as shown by the anal. of oligosaccharides (d.p. 2-6) obtained by partial acid hydrolysis. Seed coats of *S. parahybae* and *S. amazonicum* furnished similar unusual neutral linear  $\alpha$ -L-arabinofuranan (1 $\rightarrow$ 5) linked, as determined by methylation anal., optical rotation and <sup>13</sup>C NMR spectroscopy. On the other hand, *C. fastuosa* seed coats furnished two acidic arabinans. These results in terms of using galactomannans and arabinans in chemotyping, support the suggestion of Rizzini that *S. parahybae* and *S. amazonicum* are not different species.

AN 1998:659980 HCAPLUS <<LOGINID::20101221>>

DN 129:341666

OREF 129:69545a,69548a

TI Galactomannans and arabinans from seeds of Caesalpiniaceae

AU Petkowicz, Carmen L. O.; Sierakowski, Maria-Rita; Ganter, Joana Lea M. S.; Reicher, Fany

CS Departamento de Bioquímica e Departamento de Química da Universidade

Federal do Paraná, Curitiba, 81531-990, Brazil

SO Phytochemistry (1998), 49(3), 737-743

CODEN: PYTCAS; ISSN: 0031-9422

PB Elsevier Science Ltd.

DT Journal

LA English

OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 44 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Purified guar galactomannan as an improved pharmaceutical excipient

AB The purpose of this study was to assess certain pharmaceutical attributes of guar galactomannan, a hydrocolloid polysaccharide obtained from the endosperm of the leguminous plant *Cyamopsis tetragonolobus*, following purification by using both literature procedures and new processes. Expts. were performed to measure viscosity, hydration rate, tablet hardness, and dissoln. profiles of guar galactomannan both before and after purification. The viscosity of an aqueous 1% purified galactomannan solution is typically 40-50% higher than its unpurified guar galactomannan precursor. The hydration rate of an aqueous 1% purified galactomannan solution increases by 100% after purification. These physicochem. changes resulted in improvements in pharmaceutical properties such as better stir speed independence in both tablet and capsule dissoln. profiles and improved tablet hardness. For instance, time to 50% dissoln. of ranitidine HCl from capsules containing unpurified guar gum was 0.4 and 1.8 h at 20 and 40 rpm, resp., using USP Apparatus II. Using the same amount of purified guar gum and the same conditions

(20 and 40 rpm), these values were increased to 2.9 and 3.8 h, resp.

These data demonstrate a reduced effect of changing agitation conditions and the need for less guar gum to sustain the release of a water-soluble drug. Tablet hardness of purified guar gum (particle size <75  $\mu$ m) was about 7 kP and the same unpurified guar gum of equal particle size and hydration gave a hardness of less than 1 kP.

AN 1998:576261 HCAPLUS <<LOGINID::20101221>>

DN 129:293803

OREF 129:59851a,59854a

TI Purified guar galactomannan as an improved pharmaceutical excipient

AU Gebert, Mark S.; Friend, David R.

CS CIBUS Pharmaceutical, Inc., Burlingame, CA, 94010, USA  
 SO Pharmaceutical Development and Technology (1998), 3(3), 315-323  
 CODEN: PDTEFS; ISSN: 1083-7450  
 PB Marcel Dekker, Inc.  
 DT Journal  
 LA English  
 OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)  
 RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 45 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Biological activities of some galactomannans and their sulfated derivatives  
 AB Three galactomannans were isolated by extraction, with boiling water; of the whole seeds of *Leucaena* sp. and *Medicago sativa* and the seed hulls of *Glycine max*. A fourth galactomannan was obtained by alkaline extraction of *Phoenix dactylifera* seeds. Chromatog. examination of acid hydrolyzates of the four galactomannan preps. revealed the presence of sugar residues other than mannose and galactose. Isolation of galactomannan products, devoid of sugar components other than mannose and galactose, was attempted by applying three fractional precipitation methods. Three such fractions were attained from the gums of *Leucaena* sp. and *M. sativa* (at 40% ethanol) and from that of *G. max* (as its copper complex). An enzyme preparation from germinated seeds of *Leucaena* sp. when incubated with the galactomannan, resulted in a considerable decrease (from 202 to 138) in its d.p.-value and a slight change (from 2.14 to 2.0) in the mannose: galactose ratio. The crude, fractionated and partially degraded galactomannans exhibited considerable anticoagulation and fibrinolytic activities. Sulfation of these polysaccharides improved the biol. activities of both the native and enzymically modified products.

AN 1998:418304 HCAPLUS <<LOGINID:20101221>>  
 DN 129:144720  
 OREF 129:29387a  
 TI Biological activities of some galactomannans and their sulfated derivatives  
 AU Hussein, M. Magdel-Din; Helmy, Wafaa A.; Salem, H. M.  
 CS Department of Natural Products, National Research Centre, Cairo, Egypt  
 SO Phytochemistry (1998), 48(3), 479-484  
 CODEN: PYTCAS; ISSN: 0031-9422  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)  
 RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 46 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Structural studies on a galactomannan from *Cassia nodosa* seed  
 AB *Cassia nodosa* Buch.-Han. ex. Roxb. tree: Family-Leguminosae, Subfamily-Caesalpinioideae is found throughout India and commonly known as pink cassia or pink mohar. The seeds are medium sized and contain about 50-55% endosperm. The polysaccharide was isolated from separated endosperm by water extraction procedure and purified by fractional precipitation with ethanol followed by barium complexing. Average mol. weight of the galactomannan, as determined by Steric exclusion chromatog., were as follows: Mn, 4,73,000, Mw, 7,01,000, Mz, 10,80,000 and polydispersity, 1.48. The intrinsic viscosity (capillary diameter, 0.46 mm) of 1mL/g solution at 25°C was 1210 mL/g with K'=0.55. The ratio of mannose/galactose was about 3.5. The chemical structure of the galactomannan was analyzed by methylation, periodate



oxidation and <sup>13</sup>C-NMR studies. The results revealed that the hydrocolloid has the basic structure of legume seed galactomannans having the main core of (1→4) linked β-D-mannopyranosyl units substituted by single side stubs of α-(1-6)-D-galactopyranosyl residue by random arrangement.

AN 1998:196665 HCAPLUS <<LOGINID:20101221>>

DN 128:255158

OREF 128:50463a,50466a

TI Structural studies on a galactomannan from *Cassia nodosa* seed

AU Kapoor, V. P.

CS Phytochemistry Department, National Botanical Research Institute, Lucknow, 226 001, India

SO Trends in Carbohydrate Chemistry (1997), 3, 45-56

CODEN: TCHCFX

PB Surya International Publications

DT Journal

LA English

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 47 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI On the mannogalactan from the fruit bodies of *Pleurotus ostreatus* (Fr.)

Quel

AB The heteropolysaccharide composed of D-mannose, D-galactose and 3-O-methyl-D-galactose was isolated by trichloroacetic acid extraction of the fruit bodies of *P. ostreatus*. On the basis of chemical and phys. methods, the main structural feature of this heteropolysaccharide was found to be a backbone chain made up of (1→6)-linked α-D-galactopyranoses and 3-O-Me-α-D-galactopyranoses, a part of both these units being substituted in the position O-2 with β-D-mannopyranose residues.

AN 1998:122617 HCAPLUS <<LOGINID:20101221>>

DN 128:228318

OREF 128:45185a,45188a

TI On the mannogalactan from the fruit bodies of *Pleurotus ostreatus* (Fr.)

Quel

AU Jakovljevic, Dragica; Miljkovic-Stojanovic, Jelena; Radulovic, Milanka;

Hranisavljevic-Jakovljevic, Mirjana

CS Institute of Chemistry, Technology and Metallurgy, Belgrade, Yugoslavia

SO Journal of the Serbian Chemical Society (1998), 63(2), 137-142

CODEN: JSCSEN; ISSN: 0352-5139

PB Serbian Chemical Society

DT Journal

LA English

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 48 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Galactomannan from the honey locust (*Gleditsia triacanthos* L.) introduced into Russia

AB A galactomannan of 789 kDa was isolated and purified from honey locust seeds with a yield of 11.4%. Its aqueous solns. were optically active ([α]<sub>D</sub> = 36.3°) and possessed a high viscosity ([η] = 690 mL/g). By chemical methods and <sup>13</sup>C-NMR spectroscopy, the heteropolysaccharide was shown to consist of D-mannopyranose (69.7%) and D-galactopyranose (30.3%). The macromol. contains 1.4β-D-mannopyranose residues building the main chain, to 42% of which single α-galactopyranose residues are attached at position 6 (the side chains). The differently substituted mannobiose units-Man-Man, (Gal)Man-Man(Gal), and Man-Man(Gal) account for 36%, 18%, and 46% of the main chain, resp.

AN 1997:389855 HCAPLUS <<LOGINID::20101221>>  
DN 127:91921  
OREF 127:17601a,17604a  
TI Galactomannan from the honey locust (*Gleditsia triacanthos* L.) introduced into Russia  
AU Shcherbukhin, V. D.; Mestechkina, N. M.; Smirnova, N. I.; Anulov, O. V.  
CS Inst. Biokhim. im. Bakha, RAN, Moscow, 117071, Russia  
SO Prikladnaya Biokhimiya i Mikrobiologiya (1997), 33(2), 213-216  
CODEN: PBMIAM; ISSN: 0555-1099  
PB MAIK Nauka  
DT Journal  
LA Russian  
OSC.G 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)

L27 ANSWER 49 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Structure of a nonionic water-soluble galactomannan from the seeds of *Ipomea reptan*  
AB A galactomannan was isolated from the seeds of *I. reptan*. The structure of its repeating unit was determined  
AN 1997:260737 HCAPLUS <<LOGINID::20101221>>  
DN 126:328072  
OREF 126:63695a,63698a  
TI Structure of a nonionic water-soluble galactomannan from the seeds of *Ipomea reptan*  
AU Kumari, Sarita; Alam, Nazir  
CS Department Chemistry, Veer Kunwar Singh University, Ara, 802 301, India  
SO Journal of the Indian Chemical Society (1997), 74(3), 245-246  
CODEN: JICSAH; ISSN: 0019-4522  
PB Indian Chemical Society  
DT Journal  
LA English  
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)  
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 50 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Purified galactomannan as an improved pharmaceutical excipient  
AB Disclosed is a substantially anhydrous, powdered, galactomannan composition consisting essentially of a galactomannan hydrocolloid exhibiting about 50-90% by weight of anhydromannose residues and about 10-50% by weight anhydrogalactose residues; <1% protein material and <3% other nonaq. impurities. This material is useful for preparing pharmaceutical compns. both in the substantially anhydrous form but preferably in a hydrated form which includes about 5-15% by weight water. The pharmaceutical compns. comprise a a drug, the hydrated powdered galactomannan composition and optionally other excipients. The composition is particularly valuable for delivering the drug to the colon without significant release of the drug in the upper GI tract after oral administration of the composition Galactomannan was purified from a purified guar gum and converted to tablets. The hardness of tablets prepared from galactomannan with a particle size of  $\leq 125 \mu$  was higher.  
AN 1997:121386 HCAPLUS <<LOGINID::20101221>>  
DN 126:135636  
OREF 126:26147a,26150a  
TI Purified galactomannan as an improved pharmaceutical excipient  
IN Gebert, Mark S.; Friend, David R.; Wong, David; Parasrampuria, Jagdish  
PA Cibus Pharmaceutical, Inc., USA  
SO PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640163	A1	19961219	WO 1996-US9659	19960607 <--
	W: AU, CA, CN, JP, KP, KR, MX, NZ, SG				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6063402	A	20000516	US 1995-487605	19950607 <--
	CA 2224162	A1	19961219	CA 1996-2224162	19960607 <--
	AU 9661058	A	19961230	AU 1996-61058	19960607 <--
	JP 11507406	T	19990629	JP 1996-501932	19960607 <--
PRAI	US 1995-487605	A	19950607	<--	
	WO 1996-US9659	W	19960607	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L27 ANSWER 51 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Physicochemical aspects of intermolecular interaction of the galactomannan from the seeds of Mimosa scabrella Benth

AB Seed galactomannans are mostly found as endosperm cell wall storage components in leguminous plants. They have industrial applications especially in foods, due to their viscosity and thickening properties. Seeds of Mimosa scabrella Benth (bracatinga), widespread in Southern Brazil, accumulate about 30% (weight/weight) of galactomannan [Man:Gal ratio of 1.1:1, protein content of 6.5% (weight/weight)]. The usual extraction processes

provide protein components associated with the galactomannan, which may influence the functionality and quality profile of the product. A decrease in protein content to 4% was achieved by the precipitation of the galactomannan with ethanol

50% (volume/volume). This ratio decreased to 1.5% by alkaline hydrolysis at 80°C, to 1% by copper complexation, to 2.3% by ionic strength, and from 1.5 to 0.8% by enzymic hydrolysis. No changes in intrinsic viscosity [ $\eta$ ] were observed. Evaluation of the nature of protein associated with the carbohydrate matrix, by means of the chiroptical method (CD), suggests a probable  $\beta$ -antiparallel conformation. The thermal stability of the galactomannan, in the solid state, was characterized by thermal analysis (DSC/TG), showing to be below 150°C.

AN 1997:53092 HCAPLUS <<LOGINID::20101221>>

DN 126:129221

OREF 126:24921a,24924a

TI Physicochemical aspects of intermolecular interaction of the galactomannan from the seeds of Mimosa scabrella Benth

AU Bresolin, T. M. B.; Beltrami, L. M.; Sander, P. C.; Reicher, F.; Ganter, J. L. M. S.

CS Departamento de Bioquímica, UFPR, Curitiba, 81531-990, Brazil

SO Latin American Applied Research (1996), 26(Spec. Issue), 5-7

CODEN: LAARE8; ISSN: 0327-0793

PB Latin American Applied Research

DT Journal

LA English

OSC.G 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 52 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI The study of galactomannan from seeds of Trifolium hybridum L.

AB A galactomannan with a mol. weight of 134 kDa was isolated and purified from seeds of the alsike clover Trifolium hybridum L. with a yield of 3.6%.

Its aqueous solns. appeared to be optically active ( $[\alpha]_D^{25} = +83.7^\circ$ ) and possess a comparatively high viscosity ( $[\eta] = 121.6$

mL/g). By chemical methods, as well as by polarimetry and IR spectroscopy, the heteropolysaccharide macromol. was shown to be built of 1,4- $\beta$ -D-mannopyranose residues (54%), to which  $\alpha$ -galactopyranose residues were attached (46%). The galactomannan content in seeds of a tetraploid type of the clover was 2.4 times higher than that of a diploid type.

AN 1997:52305 HCAPLUS <<LOGINID::20101221>>

DN 126:142010

OREF 126:27383a,27386a

TI The study of galactomannan from seeds of *Trifolium hybridum* L.

AU Mestechkina, N. M.; Anulov, O. V.; Smirnova, N. I.; Shcherbukhin, V. D.

CS Bakh Inst. Biochem., Moscow, 107005, Russia

SO Prikladnaya Biokhimiya i Mikrobiologiya (1996), 32(6), 656-659

CODEN: PBMIAK; ISSN: 0555-1099

PB MAIK Nauka

DT Journal

LA Russian

OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L27 ANSWER 53 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Gradient ammonium sulfate fractionation of galactomannans

AB Water-soluble locust bean and guar gum galactomannans were fractionated by a graded ammonium sulfate precipitation technique. Locust bean gum galactomannans

yielded five fractions obtained at 20, 30, 45, 80, and 100% saturation with (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>. The yields of the fractions based on the total material recovered after fractionation were 3.0, 60.0, 23.0, 9.0 and 5.0, resp. Guar gum galactomannans yielded three fractions obtained at 70, 80 and 100% saturation with (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>. The yields were 31.0, 39.0 and 30.0% resp. Monosaccharide and [13C]-NMR analyses revealed differences in structural characteristics among samples. Fraction precipitated at relatively low saturation of

(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> had a low degree of galactose substitution and a high frequency of unsubstituted mannose residue pairs. They also showed high limiting viscosity values. Fractions which required much higher concentration of (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> for precipitation were highly substituted, had low frequency of unsubstituted mannose pairs and relatively low limiting viscosity values.

AN 1996:503590 HCAPLUS <<LOGINID::20101221>>

DN 125:166011

OREF 125:31103a,31106a

TI Gradient ammonium sulfate fractionation of galactomannans

AU Izydorczyk, Marta S.; Billiaderis, Costas G.

CS Food Sci. Dep., University of Manitoba, Winnipeg, MB, R3T 2N2, Can.

SO Food Hydrocolloids (1996), 10(3), 295-300

CODEN: FOHYES; ISSN: 0268-005X

PB Oxford University Press

DT Journal

LA English

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L27 ANSWER 54 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Polysaccharide occurring in water soluble *Grewia oppositifolia* seeds by isolation, purification and preliminary analysis

AB *G. oppositifolia* seeds contain a galactomannan as polysaccharide, which was extracted with water and precipitated with ethanol. The fractional precipitation was

also carried out to purify the polysaccharide. On acid hydrolysis with sulfuric acid, D-galactose and D-mannose were detected in 2:5 molar ratio. It consumed 1.25 mol of iodine by iodometrically after 28 h. The component monosaccharides were separated by cellulose column chromatog. and characterized by paper chromatog. The IR-spectral data of the

polysaccharide in KBr, indicated  $\alpha$ - and  $\beta$ -linkages in D-galactopyranose and D-mannopyranose units resp. These sugars were identified by their sp. rotation values and m.ps. with authentic sample and also by the preparation of their suitable derivs.

AN 1996:397567 HCAPLUS <<LOGINID::20101221>>

DN 125:53686

OREF 125:10225a,10228a

TI Polysaccharide occurring in water soluble *Grewia oppositifolia* seeds by isolation, purification and preliminary analysis

AU Singh, R. B.; Mohan, I.; Jindal, V. K.

CS Dep. Zoology, Agra Univ., Agra, 282 002, India

SO Acta Ciencia Indica, Chemistry (1995), 21(2), 55-60

CODEN: ACICDV; ISSN: 0253-7338

PB Pragati Prakashan

DT Journal

LA English

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L27 ANSWER 55 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Structural investigation of *Prosopis cineraria* (khezri) seed galactomannan.

AB Purified polysaccharide isolated from the *P. cineraria* seeds contains D-galactose and D-mannose, in the molar ratio of 1:4.65. Homogeneity of the polysaccharide has been checked by exclusion chromatog. and ultracentrifuge anal. Sedimentation constant of the polysaccharide was 1.65, which corresponded to a mol. weight of  $2.6 \times 10^4$ . Partial hydrolysis of the polysaccharide furnished one tri-, one tetra-, one penta saccharide and degraded polysaccharide. Structure of oligosaccharides and degraded polysaccharide have been established by methylation anal. Methylation anal. of the polysaccharide has shown that backbone is composed of (1 $\rightarrow$ 4) linked  $\beta$ -D-mannopyranosyl units, to which are attached as side chains,  $\alpha$ -D-galactopyranosyl (as a single unit or 3 units) and  $\beta$ -D-mannopyranosyl (as a single unit) by (1 $\rightarrow$ 6) linkages. Proposed structure of galactomannan is supported from periodate oxidation and Smith degradation studies. The anomeric configurations of monosaccharides in the polysaccharide have been determined by PMR,  $^{13}\text{C}$  NMR, IR and Cr trioxide oxidation

AN 1996:194410 HCAPLUS <<LOGINID::20101221>>

DN 124:226658

OREF 124:41869a,41872a

TI Structural investigation of *Prosopis cineraria* (khezri) seed galactomannan.

AU Sharma, Subodh; Soni, Purshottam L.

CS Chemistry Division, Forest Research Institute, Dehra Dun, 248 006, India

SO Trends in Carbohydrate Chemistry, developed from a Carbohydrate Conference, 9th, Lucknow, India, Nov. 24-26, 1993 (1995), Meeting Date 1993, 79-86. Editor(s): Soni, Purshottam L. Publisher: Surya International Publications, Dehradun, India.

CODEN: 62NNAO

DT Conference

LA English

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L27 ANSWER 56 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Isolation and chemical characterization of polysaccharides from *iwatake* (*Gyrophora esculenta*).

AB A heteropolysaccharide and a  $\beta$ -D-glucan were isolated from a lichen, *G. esculenta*, by cold water and alkali extns., resp. The chemical properties of purified polysaccharides were examined by acid hydrolysis, methylation, and GC-MS. The heteropolysaccharide is a highly branched galactomannan-type polysaccharide, containing an  $\alpha$ -(1 $\rightarrow$ 6)-linked

D-mannan backbone, and the glucan is a linear (1→6)-β-D-glucan. With regard to the antitumor activity, both the galactomannan and (1→6)-β-D-glucan had moderate inhibition activities on Sarcoma 180, but lower than those of branched (1→3)-β-D-glucans.

AN 1996:136471 HCAPLUS <<LOGINID:20101221>>  
 DN 124:170705  
 OREF 124:31563a,31566a  
 TI Isolation and chemical characterization of polysaccharides from iwatake (Gyrophora esculenta).  
 AS Sone, Yoshiaki; Isoda-Johmura, Momoko; Misaki, Akira  
 CU Faculty of Human Life Science, Osaka City Univ., Osaka, 558, Japan  
 SO Bioscience, Biotechnology, and Biochemistry (1996), 60(2), 213-15  
 CODEN: BBBIEJ; ISSN: 0916-8451  
 PB Japan Society for Bioscience, Biotechnology, and Agrochemistry  
 DT Journal  
 LA English  
 OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L27 ANSWER 57 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Guar gum composition and process for making it  
 AB Guar gum which demonstrates >75% light transmission at a wavelength of .apprx.500-600 nm when dispersed in water in the amount of 0.5% is manufactured by treating guar gum-containing polygalactomannan splits with a 12-30% aqueous base (e.g. NaOH) solution, washing the treated splits with water or/and organic solvents and recovering the product. The process can include a step of derivatization of the polygalactomannan.

AN 1996:106540 HCAPLUS <<LOGINID:20101221>>  
 DN 124:120647  
 OREF 124:22401a,22404a  
 TI Guar gum composition and process for making it  
 IN Cottrell, Ian William; Yeh, Michael H.  
 PA Rhone-Poulenc Inc., USA  
 SO Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 686643	A1	19951213	EP 1995-401312	19950607 <--
EP 686643	B1	20010606		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
US 5489674	A	19960206	US 1994-257609	19940609 <--
US 5536825	A	19960716	US 1994-257611	19940609 <--
IN 190047	A1	20030607	IN 1995-MA681	19950607 <--
CA 2151349	A1	19951210	CA 1995-2151349	19950608 <--
AU 9520583	A	19951221	AU 1995-20583	19950608 <--
AU 684006	B2	19971127		
BR 9502720	A	19960430	BR 1995-2720	19950608 <--
ZA 9504730	A	19970108	ZA 1995-4730	19950608 <--
MX 9502536	A	20021030	MX 1995-2536	19950608 <--
JP 08085702	A	19960402	JP 1995-143591	19950609 <--
PRAI US 1994-257609	A	19940609	<--	
US 1994-257611	A	19940609	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
 OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)

L27 ANSWER 58 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Studies on isolation, carbohydrate make-up and rheological properties of

galactomannan of sesbania (*Sesbania aculeata* Poir.) seeds

AB The galactomannan gum yield from *S. aculeata* was  $36.5 \pm 1.5\%$ , on a whole-seed basis. The galactomannan had  $[\alpha]_{D30} +46.5^\circ$ ; on acid hydrolysis it yielded galactose and mannose in the proportion 1.2:2.2. Rheol. properties of aqueous solns. of the galactomannan were investigated over a wide range of shear rates. The power law model,  $T = K\dot{\gamma}^n$ , was employed to describe the flow behavior of the galactomannan. The magnitude of flow behavior index 'n' values was  $<1.0$ , and decreased as the concentration increased, indicating pseudoplastic flow. Similarly, consistency index (K) values increased with increasing concns. of galactomannan. Thus, the galactomannan exhibited good thickening capacity.

AN 1995:963087 HCAPLUS <<LOGINID::20101221>>  
 DN 124:28423  
 OREF 124:5471a,5474a  
 TI Studies on isolation, carbohydrate make-up and rheological properties of galactomannan of sesbania (*Sesbania aculeata* Poir.) seeds  
 AU Wankhede, D. B.; Sawate, A. R.; Patil, H. B.; Ismail, S.; Deshpande, H. W.; Hashimi, S. H.  
 CS Parbhani, India  
 SO Starch/Staerke (1995), 47(11), 415-20  
 CODEN: STARDD; ISSN: 0038-9056  
 PB VCH  
 DT Journal  
 LA English

L27 ANSWER 59 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI X-ray diffraction studies on some seed galactomannans from India  
 AB The crystalline structure of four Indian seed galactomannans having mannose to galactose ratios ranging from 1.16 to 2.55 have been investigated by wide-angle x-ray diffraction of oriented films. The orthorhombic lattice consts. (Å) of the polysaccharides are as follows: galactomannans from *Trifolium alexandrinum*,  $a = 9.02$ ,  $b = 30.80$ ,  $c = 10.27$ ; from *Medicago sativa* (Lucerne)  $a = 9.00$ ,  $b = 30.66$ ,  $c = 10.24$ ; from *Cassia siamea*,  $a = 9.00$ ,  $b = 24.81$ ,  $c = 10.30$ ; and from *Cassia saltiana*,  $a = 8.99$ ,  $b = 24.75$ ,  $c = 10.30$ . In agreement with results already published for other seed gums of com. importance, the values of the b dimension of the unit cell of galactomannans decrease with decreasing galactose content. This similarity suggests that galactomannans of low and high galactose of low and high galactose content have a fundamentally related crystal structure.

AN 1995:932800 HCAPLUS <<LOGINID::20101221>>  
 DN 124:117764  
 OREF 124:21952h,21953a  
 TI X-ray diffraction studies on some seed galactomannans from India  
 AU Kapoor, Virendra P.; Chanzy, Henri; Taravel, Francois R.  
 CS National Botanical Research Institute, Lucknow, 226001, India  
 SO Carbohydrate Polymers (1995), 27(3), 229-33  
 CODEN: CAPOD8; ISSN: 0144-8617  
 PB Elsevier  
 DT Journal  
 LA English

OSC.G 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)

L27 ANSWER 60 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Galactomannan products and compositions containing the same  
 AB A galactomannan isolated from fenugreek seed has  $\geq 50$  repeating units of mannose and galactose in a ratio of 0.5-1.0 and 1.8-1.0, a protein content of  $\leq 20\%$ , a saponin content of  $\leq 5\%$ , and a lipid content of  $\leq 1\%$ , and is useful as an active ingredient in nutraceutical and cosmetic products.

AN 1995:835679 HCAPLUS <<LOGINID::20101221>>  
 DN 123:231852

OREF 123:41349a,41352a

TI Galactomannan products and compositions containing the same  
IN Garti, Nissim; Aserin, Abraham; Madar, Zecharia; Sternheim, Boaz  
PA Yissum Research Development Co., Israel  
SO PCT Int. Appl., 37 pp.  
CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9521199	A1	19950810	WO 1995-GB239	19950207 <--
	W:	AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US			
	RW:	KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	IL 108583	A	19970610	IL 1994-108583	19940207 <--
	AU 9515837	A	19950821	AU 1995-15837	19950207 <--
	EP 743959	A1	19961127	EP 1995-907740	19950207 <--
	EP 743959	B1	19990721		
	R:	DE, FR, GB, IT, NL, SE			
	US 5847109	A	19981208	US 1996-693188	19961119 <--
PRAI	IL 1994-108583	A	19940207 <--		
	WO 1995-GB239	W	19950207 <--		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT  
OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)  
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 61 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Rational approach to fractionation, isolation, and characterization of polysaccharides from the lichen *Cetraria islandica*  
AB Polysaccharides, isolated from the lichen *Cetraria islandica*, have antimicrobial effectiveness. For pharmaceutical applications the two glucan components lichenan and isolichenan as well as the galactomannan component are of actual interest. Especially the  $\alpha$ -glucan isolichenan is used as an active ingredient in cough lozenges. The conditions for the extraction of the raw material, mainly pH and temperature, have a strong influence on the yield of lichenan, isolichenan, and galactomannan, and also on the amount of tannins in the extract. Target products and also byproducts give higher extraction yields with increasing extraction temps. Hot water extraction with subsequent fractionation of the extracted polysaccharides by multiple freezing/thawing steps and water removal applying ethanol and ether permitted the isolation of the target polysaccharides in preparative quantities. Tannins were removed by reversed phase chromatog. IR and NMR spectroscopy were used for structural characterization of lichenan and isolichenan. After optimization of the hot water extraction process no significant lower extraction and fractionation yields have been obtained compared to the established tricky DMSO extraction procedure.  
AN 1995:722771 HCAPLUS <<LOGINID:20101221>>  
DN 123:137991  
OREF 123:24441a,24444a  
TI Rational approach to fractionation, isolation, and characterization of polysaccharides from the lichen *Cetraria islandica*  
AU Kraemer, P.; Wincierz, U.; Gruebler, G.; Tschakert, J.; Voelter, W.; Mayer, H.



CS Dechema, Frankfurt/Main, Germany  
SO Arzneimittel-Forschung (1995), 45(6), 726-31  
CODEN: ARZNAD; ISSN: 0004-4172  
PB Cantor  
DT Journal  
LA English

L27 ANSWER 62 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI A new galactomannan from medicinal plant *Leucaena leucocephala*  
AB A water soluble seed gum having D-galactose (1 part) and D-mannose (4 parts) was isolated from *L. leucocephala*. Hydrolysis of methylated seed gum furnished three methylated sugars, 2,3,4,6- tetra-O-Me-D-galactose, 2,3,6-tri-O-methyl-D-mannose, and 2,3-di-O-methyl-D-mannose in the molar ratio 1:2:1. Partial acid catalyzed hydrolysis of the seed gum gave four oligosaccharides, epimelobiose, mannoibiose galactosyl mannoibiose and mannotriose along with the component sugars.  
AN 1995:460648 HCAPLUS <<LOGINID:20101221>>  
DN 122:260999  
OREF 122:47525a,47528a  
TI A new galactomannan from medicinal plant *Leucaena leucocephala*  
AU Singh, Pramod Kumar; Gupta, Manoj Kumar; Gupta, P. C.  
CS India  
SO Modelling, Measurement & Control, C: Energetics, Chemistry, Earth, Environmental & Biomedical Problems (1994), 46(1,2), 1-8  
CODEN: MMCPE5; ISSN: 1259-5977  
PB Association for the Advancement of Modelling and Simulation Techniques in Enterprises  
DT Journal  
LA English  
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L27 ANSWER 63 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI 13C NMR and crystallographic studies of *Senna didymobotrya* (Fresen) Irwin & Barneby seed galactomannan  
AB The structure of *Senna didymobotrya* (Fresen) Irwin & Barneby (syn. *Cassia didymobotrya* Fresen) seed galactomannan having a galactose/mannose ratio of about 1:3; and a mol. weight (mw) of  $5.67 \times 10^4$  has been investigated by 13C NMR and wide angle X-ray diffraction studies. The orthorhombic lattice consts. of the hydrated gum are as follow:  $a=9.00 \text{ \AA}$ ,  $b=24.62 \text{ \AA}$  and  $c=10.30 \text{ \AA}$ . The results of X-ray fiber studies show that the b dimension of the unit cell is highly sensitive to the relative humidity (RH), galactose substitution and orientation of the films. In agreement with results already published and other com. important seed galactomannans, the a and c dimensions have relative constancy with % RH and the values are almost similar to  $\beta$ -(1 $\rightarrow$ 4) mannan. The probable space group symmetry of the unit cell is P2<sub>1</sub> 2<sub>1</sub> 2 and that the various galactomannans from different origin have the similar fundamental crystal structure.  
AN 1995:45827 HCAPLUS <<LOGINID:20101221>>  
DN 123:9791  
OREF 123:2059a,2062a  
TI 13C NMR and crystallographic studies of *Senna didymobotrya* (Fresen) Irwin & Barneby seed galactomannan  
AU Kapoor, V. P.; Taravel, F. R.; Chanzy, H.  
CS Phytochemistry Dep., National Botanical, Lucknow, 226 001, India  
SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1995), 34B(4), 310-14  
CODEN: IJSBDB; ISSN: 0376-4699  
PB Publications & Information Directorate, CSIR  
DT Journal  
LA English

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L27 ANSWER 64 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI NMR structural characterization of galactomannan from *Cassia occidentalis*  
AB The presence of random distribution of D-galactose residues in side chains of *Cassia occidentalis* seed galactomannan has been confirmed by NMR anal.  
AN 1995:333443 HCAPLUS <<LOGINID::20101221>>  
DN 122:187952  
OREF 122:34447a,34450a  
TI NMR structural characterization of galactomannan from *Cassia occidentalis*  
AU Gupta, A. K.; Chougule, M. A.; Pakdalkar, R. K.  
CS Department Chemistry, Shivaji University, Kolhapur, 416 004, India  
SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1995), 34B(2), 169-70  
CODEN: IJSBDB; ISSN: 0376-4699  
PB Publications & Information Directorate, CSIR  
DT Journal  
LA English  
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L27 ANSWER 65 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Clear and stable galactomannan and its preparation  
AB Crude galactomannan (I) was purified from its solution by filtering in the presence of monosaccharides and removing insol. impurities to give clear I with stable viscosity. Thus, arabinose was used in purification of I.  
AN 1993:673766 HCAPLUS <<LOGINID::20101221>>  
DN 119:273766  
OREF 119:48965a,48968a  
TI Clear and stable galactomannan and its preparation  
IN Morikawa, Mitsuo  
PA Mitsubishi Rayon Co, Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 05239106	A	19930917	JP 1992-78809	19920302 <--
	JP 2729722	B2	19980318		
PRAI	JP 1992-78809		19920302	<--	

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L27 ANSWER 66 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
TI Purification of galactomannan  
AB In the title process, crude galactomannan (I) was treated in aqueous solution with a chelating agent, and filtered to give a filtrate which was then precipitated with a precipitating agent giving pure product. Claimed chelating agents include polyphosphate salts, EDTA, and EDTA-salts. Thus, mixing 240 g crude locust-bean gum with 2 g Na tripolyphosphate in 20 L water at 85° for 1 h, adding citric acid and NaH2PO4 to pH 5.8, settling at 40°, adding filtration aids, and pressure-filtering gave a filtrate. Adding iso-PrOH to the filtrate afforded a precipitate (pure I) after the working-up.

AN 1993:652492 HCAPLUS <<LOGINID::20101221>>  
DN 119:252492  
OREF 119:45019a,45022a  
TI Purification of galactomannan  
IN Morikawa, Mitsuo

PA Mitsubishi Rayon Co, Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05239105	A	19930917	JP 1992-78786	19920302 <--
PRAI	JP 1992-78786		19920302	<--	
OSC.G	1	THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)			

L27 ANSWER 67 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Purification of galactomannan

AB Aqueous solns. containing crude galactomannan (I) and alkaline earth metal salts are

filtered to remove insol. substances and I is recovered from the filtrate. Thus, 300 L water containing 3.5 kg locust beam gum, 50 g Ca chloride, and 3.7 kg perlite was filtered, mixed with equal volume isopropanol to form ppts. which were dewatered, dried, pulverized, and dissolved in water to give a solution having transparency 97.0%, compared with 95.0 for a solution prepared without Ca chloride.

AN 1988:495056 HCAPLUS <<LOGINID::20101221>>

DN 109:95056

OREF 109:15855a,15858a

TI Purification of galactomannan

IN Morikawa, Mitsuo; Yoshii, Hideki; Abe, Mutsumi; Ninomiya, Hirofumi

PA Mitsubishi Acetate Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63101402	A	19880506	JP 1986-245387	19861017 <--
	JP 05000401	B	19930105		
PRAI	JP 1986-245387		19861017	<--	
OSC.G	2	THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)			

L27 ANSWER 68 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Purification of galactomannan

AB The title purification involves treatment of a galactomannan-containing substance

with hot water, separation of the insol. matters by filtration, and recovery of galactomannan from the aqueous solution, wherein the hot water or aqueous

solution was

kept at pH 4.5-6.5 for obtaining purified galactomannan whose aqueous solution shows no viscosity loss upon standing. A mixture of 3.0 kg crude locust beam gum, 30 mL 36% HCl, and 300 L water was stirred at 80° for 1 h (pH 5.8), and filtered using perlite filtering aid to give a clean solution showing viscosity 1950 cP (at 25°) initially and 1650 cP after 2 days at 36°, compared with 2000 and <50, resp., for a control without HCl. The solution was treated with iso-PrOH to precipitate purified

locust

beam gum which (4 g) was dissolved in 400 mL water to give a solution with viscosity 3200 cP and transparency 97.8%.

AN 1988:223373 HCAPLUS <<LOGINID::20101221>>

DN 108:223373

OREF 108:36657a,36660a

TI Purification of galactomannan

IN Ninomiya, Hirofumi; Yoshii, Hideki; Abe, Michoshi  
 PA Mitsubishi Acetate Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63035606	A	19880216	JP 1986-179566	19860730 <--
	JP 02007962	B	19900221		
PRAI	JP 1986-179566		19860730	<--	

L27 ANSWER 69 OF 69 HCAPLUS COPYRIGHT 2010 ACS on STN  
 TI Single step purification of polysaccharides using immobilized jackfruit  
 lectin as affinity adsorbent  
 AB An  $\alpha$ -D-galactosyl-binding lectin from *Artocarpus integrifolia*  
 (jackfruit) seeds has been coupled to cyanogen bromide-activated Sepharose  
 4B. Purification of 3 galactomannans from fenugreek, guar, and Poinciana  
 pulcherrima seeds, a galactoglucomannan from *Crotalaria saltiana* seed and  
 a polysaccharide from the albumen gland of the snail *Littorina littorea*  
 has been achieved by affinity chromatog. on a lectin-Sepharose column.  
 The recovery of the polysaccharides absolutely devoid of protein is about  
 40%.  
 AN 1988:218419 HCAPLUS <<LOGINID:20101221>>  
 DN 108:218419  
 OREF 108:35795a,35798a  
 TI Single step purification of polysaccharides using immobilized jackfruit  
 lectin as affinity adsorbent  
 AU Chowdhury, Sunanda; Ray, Sudipa; Chatterjee, Bishnu P.  
 CS Dep. Biol. Chem., Indian Assoc. Cultiv. Sci., Calcutta, 700 032, India  
 SO Glycoconjugate Journal (1988), 5(1), 27-34  
 CODEN: GLJOEW; ISSN: 0282-0080  
 DT Journal  
 LA English